MZ-NH900

SERVICE MANUAL

Ver 1.1 2004.09

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
Chinese Model
Tourist Model



US and foreign patents licensed from Dolby Laboratories.

Model Name Using Similar Mechanism	NEW
MD Mechanism Type	MT-MZNH900-181
Optical Pick-up Name	ABX-U

- SonicStage and SonicStage logo are trademarks or registered trademarks of Sony Corporation.
- MD Simple Burner, OpenMG, “Magic Gate”, “MagicGate Memory Stick”, “Memory Stick”, Hi-MD, Net MD, ATRAC, ATRAC3, ATRAC3plus and their logos are trademarks of Sony Corporation.
- Microsoft, Windows, Windows NT and Windows Media are trademarks or registered trademarks of Microsoft Corporation in the United States and /or other countries.
- IBM and PC/AT are registered trademarks of International Business Machines Corporation.
- Macintosh is a trademark of Apple Computer, Inc. in the United States and/or other countries.
- MMX and Pentium are trademarks or registered trademarks of Intel Corporation.
- All other trademarks and registered trademarks are trademarks or registered trademarks of their respective holders.

SPECIFICATIONS

Audio playing system
MiniDisc digital audio system
Laser diode properties
Material: GaAlAs
Wavelength: λ = 790 nm
Emission duration: continuous
Laser output: less than 44.6 µW
(This output is the value measured at a distance of 200 mm from the lens surface on the optical pick-up block with 7 mm aperture.)
Recording and playback time
When using HMD1G (1GB disc):
Maximum 34 hours in Hi-LP stereo
When using MDW-80 in Hi-MD mode:
Maximum 10 hours and 10 min. in Hi-LP stereo
When using MDW-80 in MD mode:
Maximum 160 min. in monaural
Maximum 320 min. in LP4 stereo
Revolutions
350 rpm to 3,000 rpm (CLV)
Error correction
Hi-MD:
LDC (Long Distance Code)/BIS (Burst Indicator Subcode)
MD:
ACIRC (Advanced Cross Interleave Reed Solomon Code)
Sampling frequency
44.1 kHz
Sampling rate converter
Input: 32 kHz/44.1 kHz/48 kHz
Coding
Hi-MD:
ATRAC3plus (Adaptive TRansform Acoustic Coding 3 plus)
MD:
ATRAC
ATRAC3 — LP2/LP4
Modulation system
Hi-MD:
1-7RLL (Run Length Limited)/PRML (Partial Response Maximum Likelihood)
MD:
EFM (Eight to Fourteen Modulation)
Frequency response
20 to 20,000 Hz ± 3 dB
Inputs[1)]
MIC: stereo mini-jack
(minimum input level 0.13 mV)
Line in:
stereo mini-jack for analog input
(minimum input level 49 mV)
optical (digital) mini-jack for optical (digital) input
Outputs
🎧/LINE OUT[2)]: stereo mini-jack (dedicated remote control jack)/194 mV (10 kΩ)
Maximum output (DC)[2)]
Headphones:
3 mW + 3 mW (16 Ω) (European models)
5 mW + 5 mW (16 Ω) (Other models)
Power requirements
Sony AC Power Adaptor connected at the DC IN 3V jack:
120 V AC, 60 Hz (Models for USA, Canada, Mexico and Taiwan)
240 V AC, 50 Hz (Model for Australia)
220 V AC, 50 Hz (Models for China and Argentine)
100 - 240 V AC, 50/60 Hz (Other models)
The recorder:
Nickel metal hydride rechargeable battery NH-10WM 1.2V 900 mAh (MIN) Ni-MH
LR6 (size AA) alkaline battery
Battery charging stand:
AC power adaptor DC 3V
Operating temperature
+5° C (+41° F) to +35° C (+95° F)
Dimensions
Approx. 81.3 × 77.8 × 21.2 mm (w/h/d)
(3 1/4 × 3 1/8 × 27/32 in.) (excluding projecting parts and controls)
Mass
Approx. 110 g (3.9 oz) (the recorder only)
Approx. 133 g (4.7 oz) (including the rechargeable battery)

1)The LINE IN (OPT) jack is used to connect either a digital (optical) cable or a line (analog) cable.
2)The 🎧/LINE OUT jack connects either headphones/earphones or a line cable.
3)Measured in accordance with JEITA.

Supplied accessories
AC power adaptor (1)
Battery charging stand (1)
Remote control (1)
Headphones (for USA model) (1)
Earphones (except USA model) (1)
Dedicated USB cable (1)
NH-10WM Nickel metal hydride rechargeable battery (1)
CD-ROM (SonicStage/MD Simple Burner) (1)*
Dry battery case (1)
Battery carrying case (1)
Carrying pouch (except USA model) (1)
Optical cable (1)
Clamp filter (2)
*Do not play a CD-ROM on an audio CD player.

Design and specifications are subject to change without notice.

PORTABLE MINIDISC RECORDER

9-879-121-02
2004I05-1

Sony Corporation
Personal Audio Company
Published by Sony Engineering Corporation

SONY®

Battery life

When recording continuously in Hi-MD mode

(Unit: approx.hours)(JEITA[1])

Disc type	Batteries	Linear PCM	Hi-SP	Hi-LP
1GB Hi-MD disc	NH-10WM[2]	3.5	5	6
	LR6[3]	2.5	3.5	4
	NH-10WM + LR6	6	8.5	10
60/74/80-minute standard disc	NH-10WM	3.5	5	6
	LR6	4.5	7	8
	NH-10WM + LR6	8	12	14

[1] Measured in accordance with the JEITA (Japan Electronics and Information Technology Industries Association) standard.
[2] When using a 100% fully charged nickel metal hydride rechargeable battery
[3] When using a Sony LR6 (size AA) "STAMINA" alkaline dry battery (produced in Japan)

When recording continuously in MD mode

(Unit: approx.hours)(JEITA)

Disc type	Batteries	SP Stereo	LP2 Stereo	LP4 Stereo
60/74/80-minute standard disc	NH-10WM	5.5	6.5	7.5
	LR6	7	8.5	9.5
	NH-10WM + LR6	12.5	15	17

When playing continuously in Hi-MD mode

(Unit: approx.hours)(JEITA)

Disc type	Batteries	Linear PCM	Hi-SP	Hi-LP
1GB Hi-MD disc	NH-10WM	5	8.5	10
	LR6	10	16	19
	NH-10WM + LR6	15	24.5	29
60/74/80-minute standard disc	NH-10WM	5	8.5	11
	LR6	9	14.5	19
	NH-10WM + LR6	14	23	30

When playing continuously in MD mode

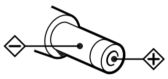
(Unit: approx.hours)(JEITA)

Disc type	Batteries	SP Stereo	LP2 Stereo	LP4 Stereo
60/74/80-minute standard disc	NH-10WM	9	10.5	12
	LR6	18	21	24
	NH-10WM + LR6	27	31.5	36

On power sources

- For use in your house: For the supplied battery charging stand, use the AC power adaptor supplied with this recorder. Do not use any other AC power adaptor since it may cause the recorder to malfunction.

Polarity of the plug



CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COM- POSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

TABLE OF CONTENTS

SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size)

LF : LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 °C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350 °C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscou-s (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

Providing the required system environment

System requirements

The following system environment is required in order to use the SonicStage/MD Simple Burner software for the MD Walkman.

Computer	IBM PC/AT or Compatible
	• CPU: Pentium II 400 MHz or higher (Pentium III 450 MHz or higher is recommended.) • Hard disk drive space: 200 MB or more (1.5 GB or more is recommended) (The amount space will vary according to Windows version and the number of music files stored on the hard disk.) • RAM: 64 MB or more (128 MB or more is recommended)
	Others • CD drive (capable of digital playback by WDM) • Sound Board • USB port (supports USB (previously USB 1.1))
Operating System	Factory installed: Windows XP Media Center Edition 2004/Windows XP Media Center Edition/Windows XP Professional/Windows XP Home Edition/ Windows 2000 Professional/Windows Millennium Edition/Windows 98 Second Edition
Display	High Color (16bit) or higher, 800 × 600 dots or better (1024 ×768 dots or better is recommended)
Others	• Internet access: for Web registration, EMD services and CDDB • Windows Media Player (version 7.0 or higher) installed for playing WMA files

This software is not supported by the following environments:

- OSs other than the indicated above
- Personally constructed PCs or operating systems
- An environment that is an upgrade of the original manufacturer-installed operating system
- Multi-boot environment
- Multi-monitor environment
- Macintosh

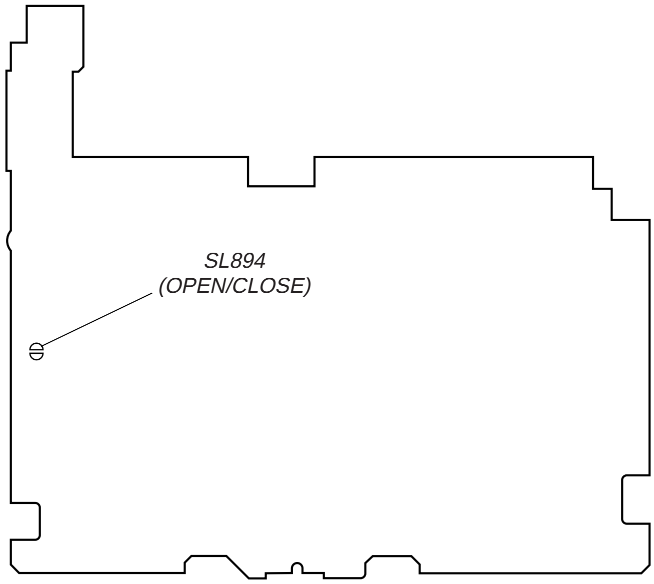
Notes

- We do not ensure trouble-free operation on all computers that satisfy the system requirements.
- The NTFS format of Windows XP/Windows 2000 Professional can be used only with the standard (factory) settings.
- We do not ensure trouble-free operation of the system suspend, sleep, or hibernation function on all computers.
- For Windows 2000 Professional users, install Service Pack 3 or later version before using the software.

OPERATION CHECK WHEN THE LID IS OPEN

In making an operation check with the MAIN Board removed from the set, short the SL894 (OPEN/CLOSE) of the MAIN Board with the solder before starting the operation check.
Note: Be sure to remove the solder used for shortcircuit after the repaire completed.

– MAIN Board (Conductor Side) –

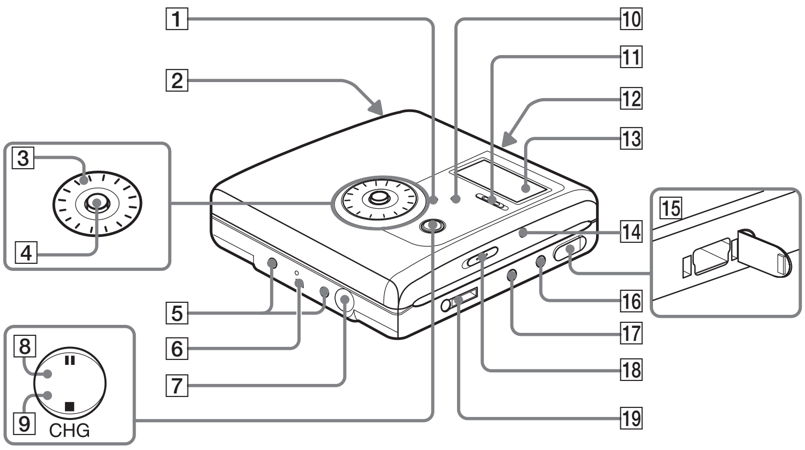


This section is extracted from instruction manual.

SECTION 2
GENERAL

Looking at controls

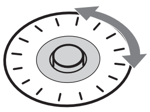
The recorder



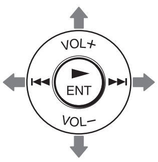
1 •NAVI/ ⬬MENU button
Press lightly to go to the NAVI (navigation) setting mode.
Press for 2 seconds or more to go to MENU setting mode.

2 Battery compartment

3 Jog dial



4 5-way control key



Operation	Function
Press ►ENT [1)]	play, enter
Press towards ⏮	find the beginning of the previous track, rewind
Press towards ⏭	find the beginning of the next track, fast forward
Press towards VOL +[1)] or VOL –.	volume

[1)] There are tactile dots beside the ►ENT and VOL + buttons.

5 Terminals for attaching dry battery case

6 Terminal for attaching the battery charging stand

7 DC IN 3V jack

8 ❚❚ (pause) button

9 ■ (stop) • CANCEL/CHG button

10 GROUP button

11 ●REC (record) switch

12 OPEN switch

13 Display window

14 T MARK button

15 USB cable connecting jack

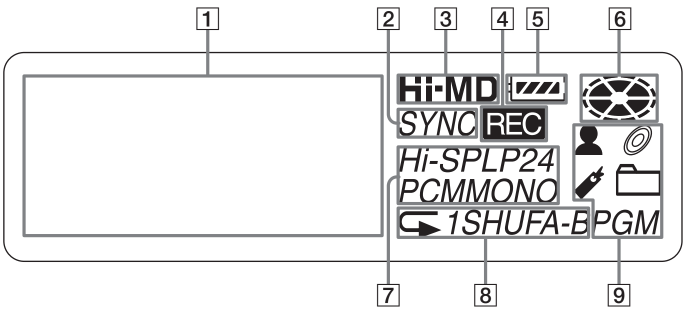
16 LINE IN (OPT) jack

17 MIC (PLUG IN POWER) jack
There is a tactile dot beside the MIC (PLUG IN POWER) jack.

18 HOLD switch
Slide the switch in the direction of the arrow to disable the buttons on the recorder. To prevent the buttons from being accidentally operated when you carry the recorder, use this function.

19 🎧 (headphones/earphones)/LINE OUT jack

The display window of the recorder



1 Character information display
Displays the disc and track names, date, error messages, track numbers, etc.

2 SYNC (synchro-recording) indication

3 Hi-MD/MD indication
"Hi-MD" lights up when the operation mode of the recorder is in Hi-MD mode and "MD" lights up when the operation mode is in MD mode.

4 REC indication
Lights up during recording or file transfers from the computer. When flashing, the recorder is in record standby mode.

5 Battery indication
Shows the approximate remaining battery power. If the batteries are weak, the indication becomes empty and starts flashing.

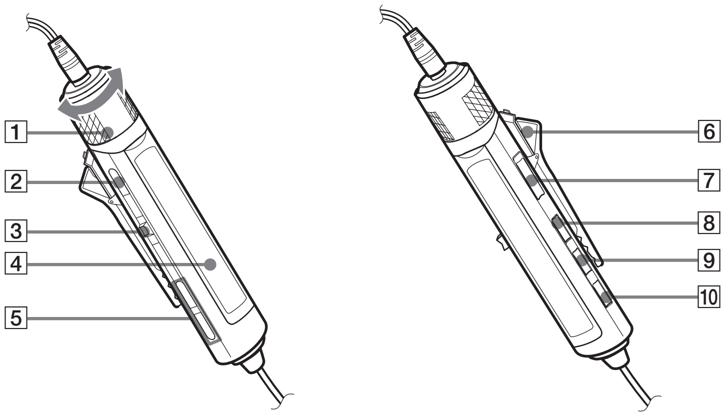
6 Disc indication
Shows that the disc is rotating for recording or playing.

7 Track mode (PCM, Hi-SP, Hi-LP, SP, LP2, LP4, MONO) indication

8 Sub play mode/Repeat play indications
Shows the selected Sub play mode (single-track play, shuffle play, etc.) or Repeat play.

9 Main play mode indications
Shows the selected main play mode (group play, program play, etc.).

The headphones/earphones with a remote control



1 Volume Control (VOL +, –)
Turn to adjust the volume.

2 ■ (stop) button

3 Jog lever (►II/ENT, I◄◄, ►►I)

Operation	Function
Press ►II/ENT	play, pause, enter
Press towards I◄◄	find the beginning of the previous track, rewind
Press towards ►►I	find the beginning of the next track, fast forward

4 Display window

5 (group) +, –

6 Clip
See "Using the clip for the remote control".

7 HOLD switch
To prevent the buttons from being accidentally operated when you carry the recorder, use this function.

8 DISPLAY button

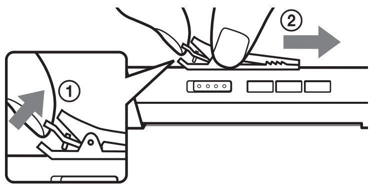
9 P-MODE/ button

10 SOUND button

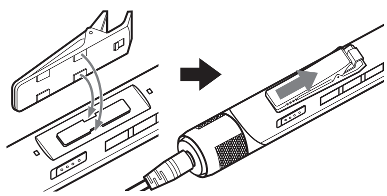
Using the clip for the remote control

It may be hard for you to read the indications in the display if the remote control is attached upside down with the clip in its current position. In this case, attach the clip in the opposite direction as shown below.

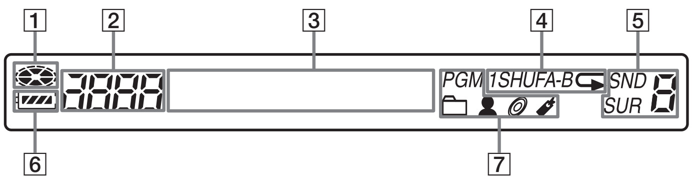
1 Remove the clip.



2 Attach the clip in the opposite direction.



The display window of the remote control



1 **Disc indication**

2 **Track number display**

3 **Character information display**

4 **Sub play mode/Repeat play indications**

5 **SND (sound) and SUR (surround) indications**

6 **Battery level indication**

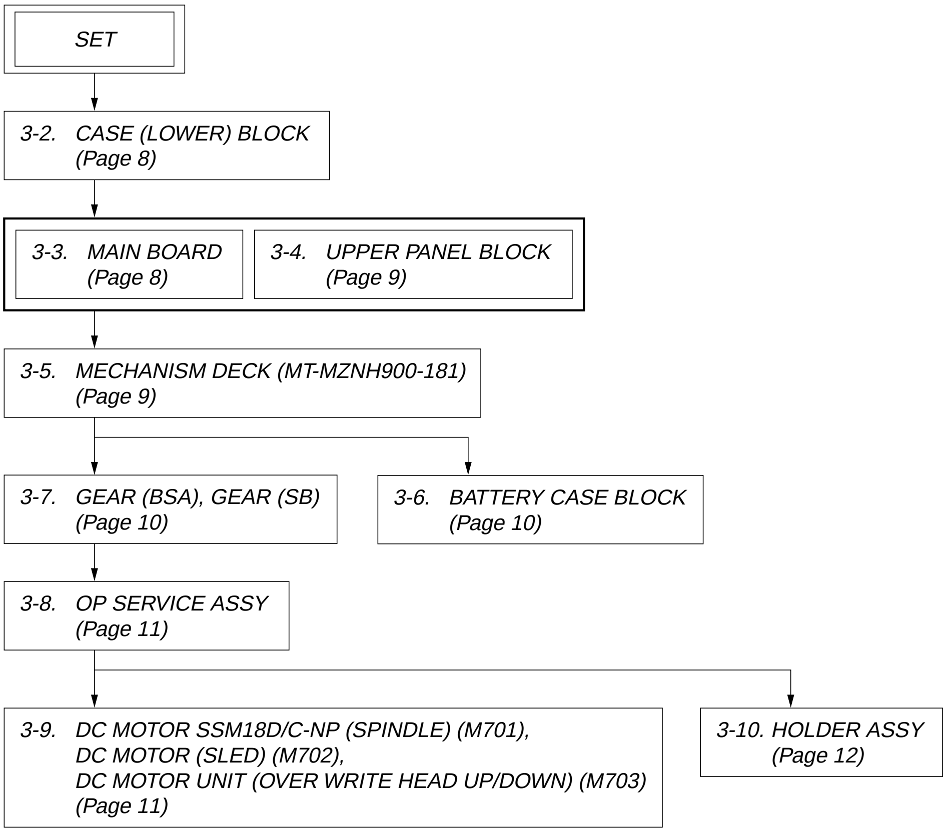
7 **Main play mode indications**

SECTION 3
DISASSEMBLY

- This set can be disassembled in the order shown below.

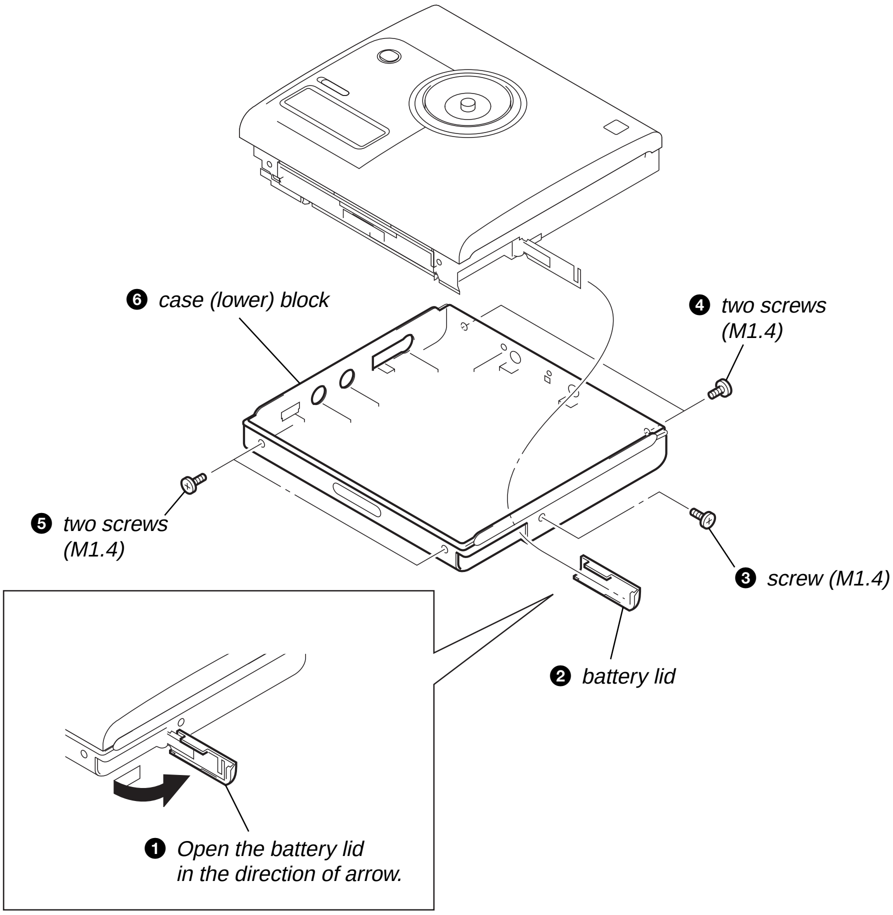
3-1. DISASSEMBLY FLOW

Note 1: *The process described in* ▭ *can be performed in any order.*
Note 2: *Without completing the process described in* ▭ *, the next process can not be performed.*

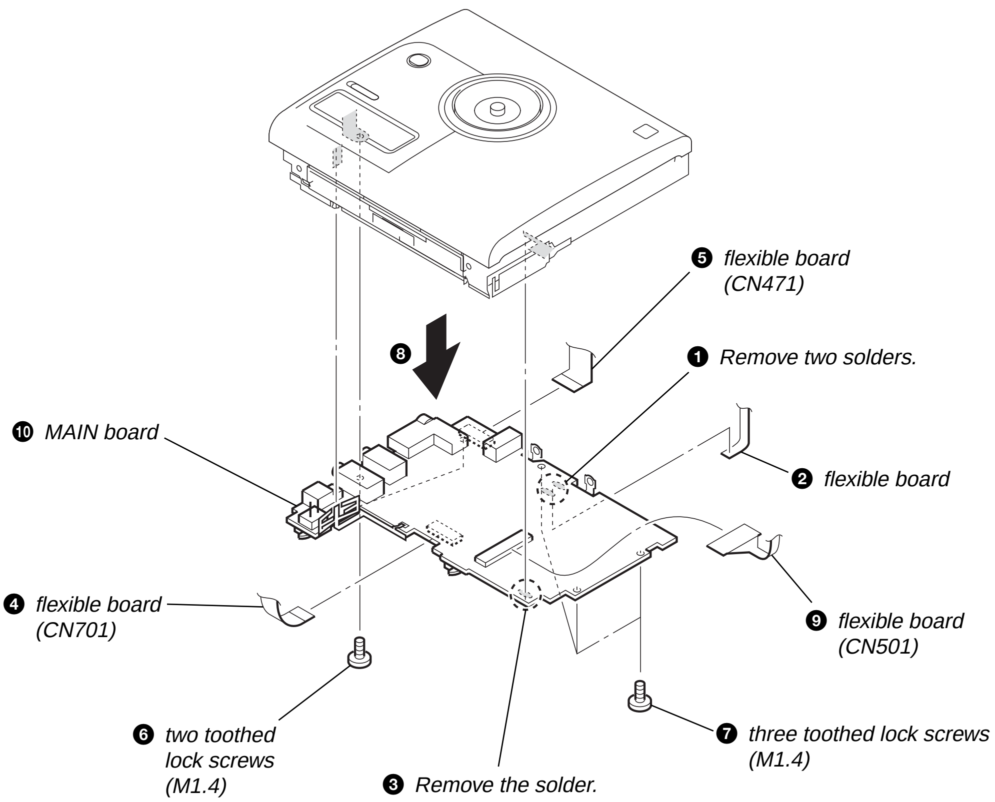


Note: Follow the disassembly procedure in the numerical order given.

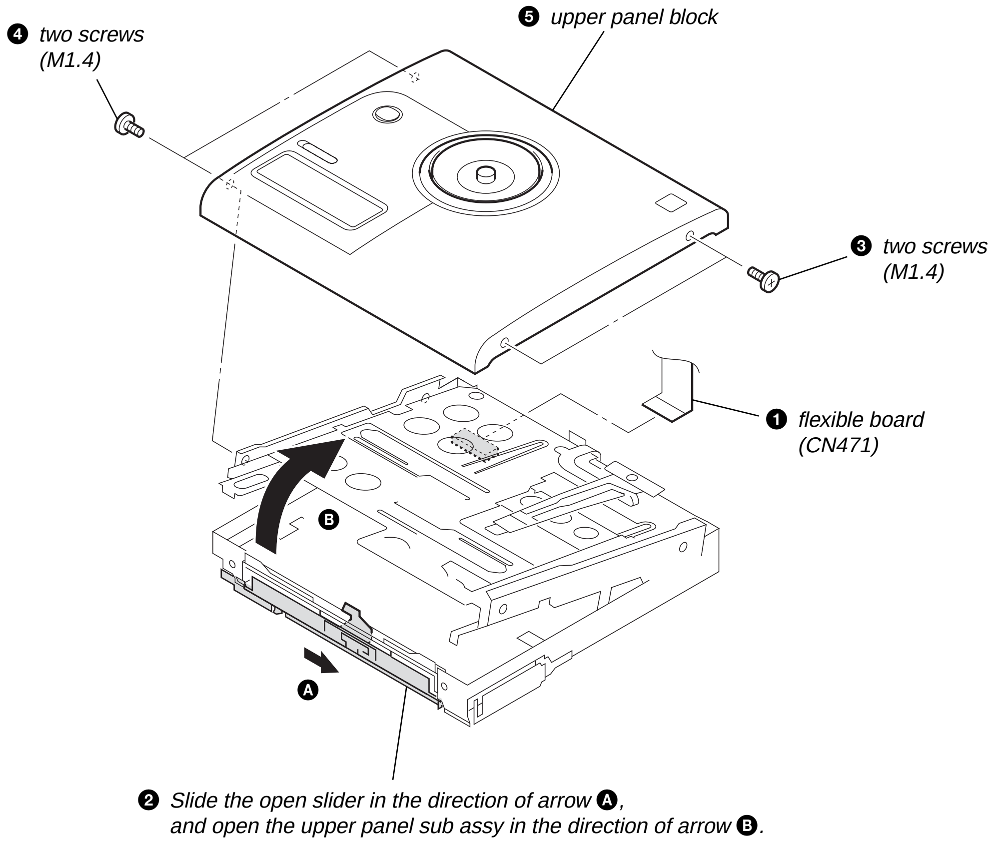
3-2. CASE (LOWER) BLOCK



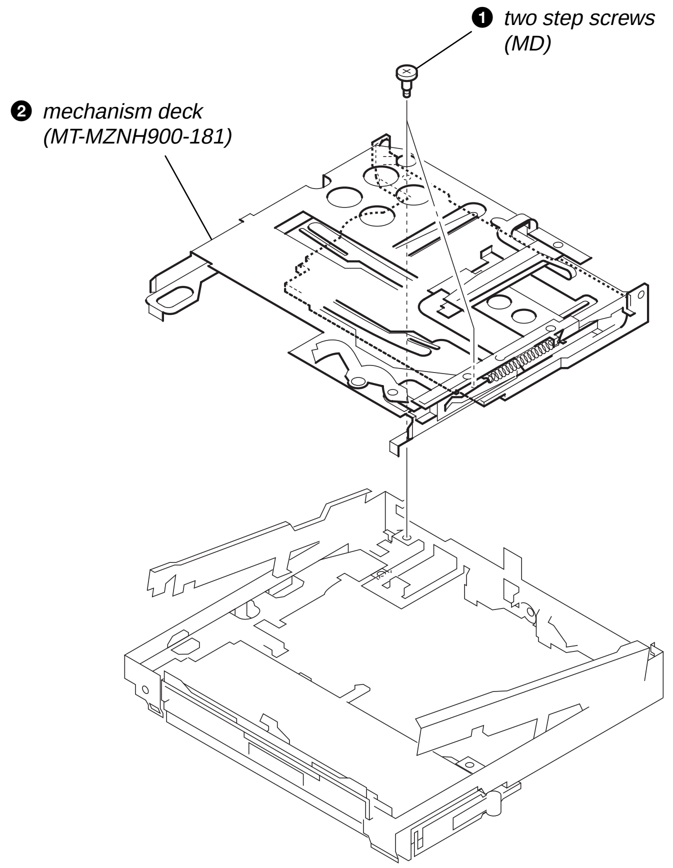
3-3. MAIN BOARD



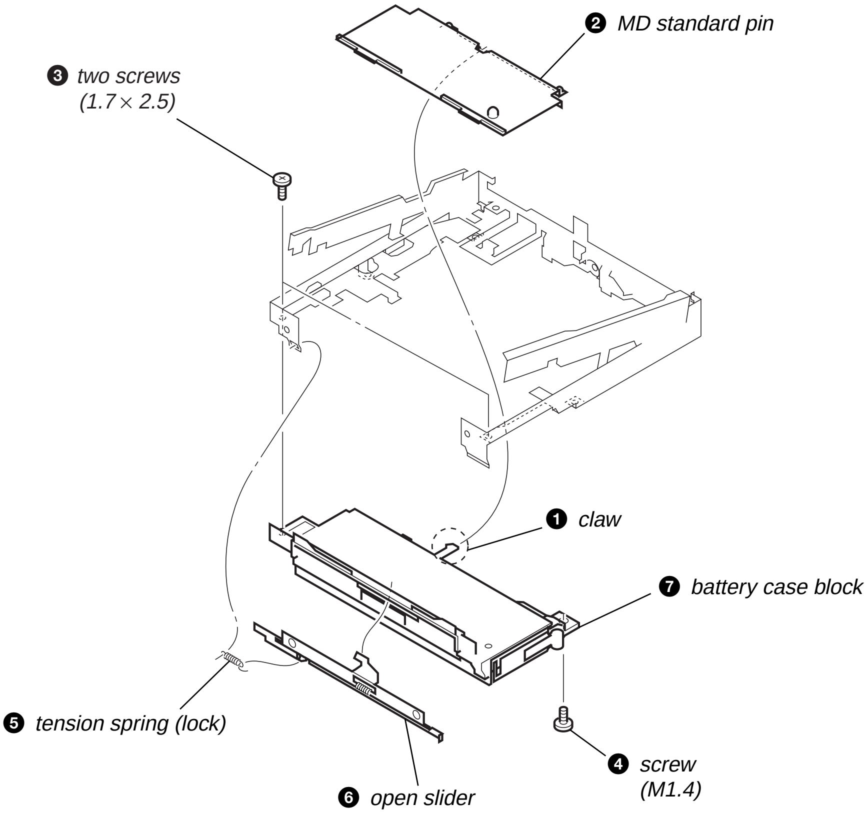
3-4. UPPER PANEL BLOCK



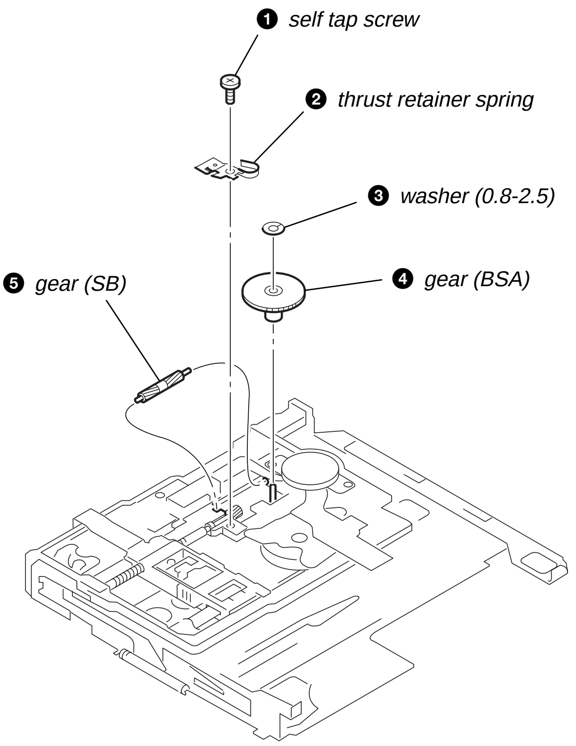
3-5. MECHANISM DECK (MT-MZNH900-181)



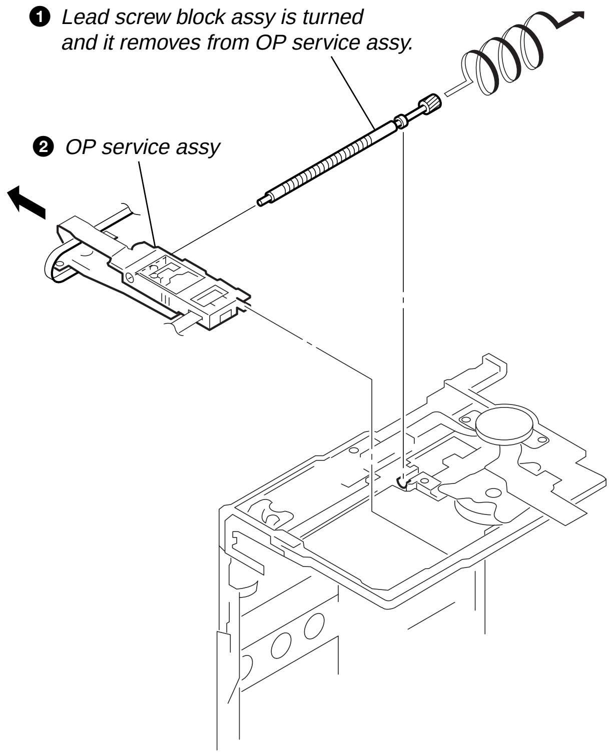
3-6. BATTERY CASE BLOCK



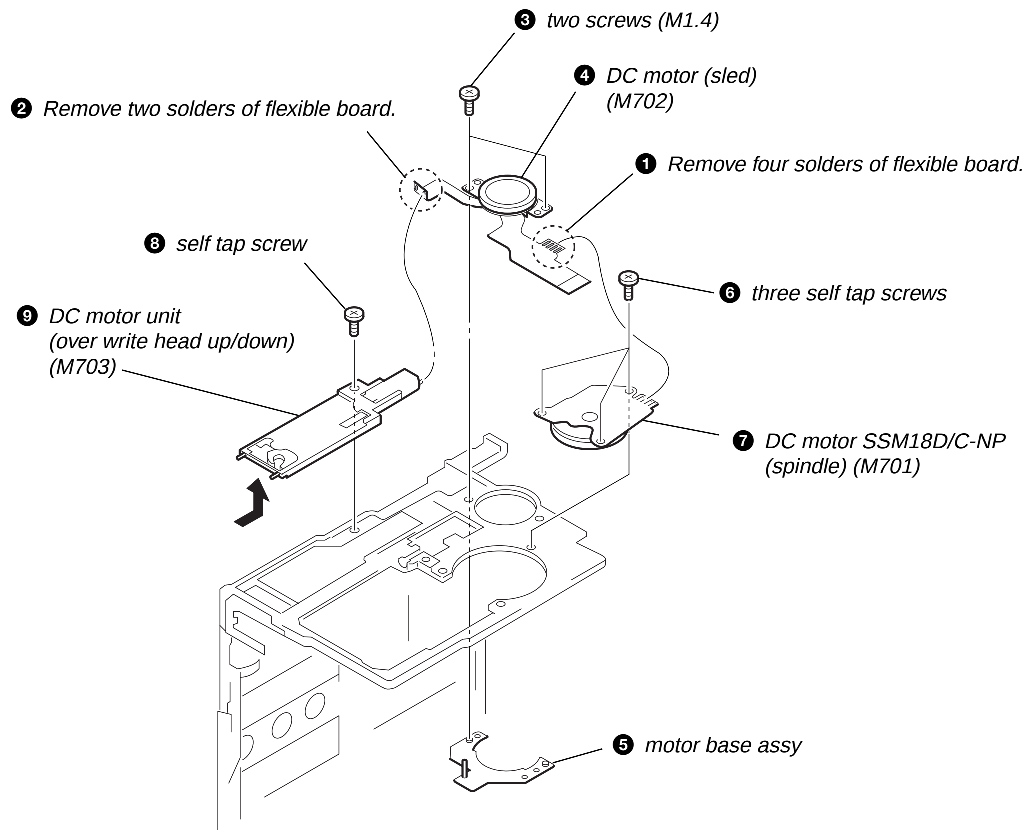
3-7. GEAR (BSA), GEAR (SB)



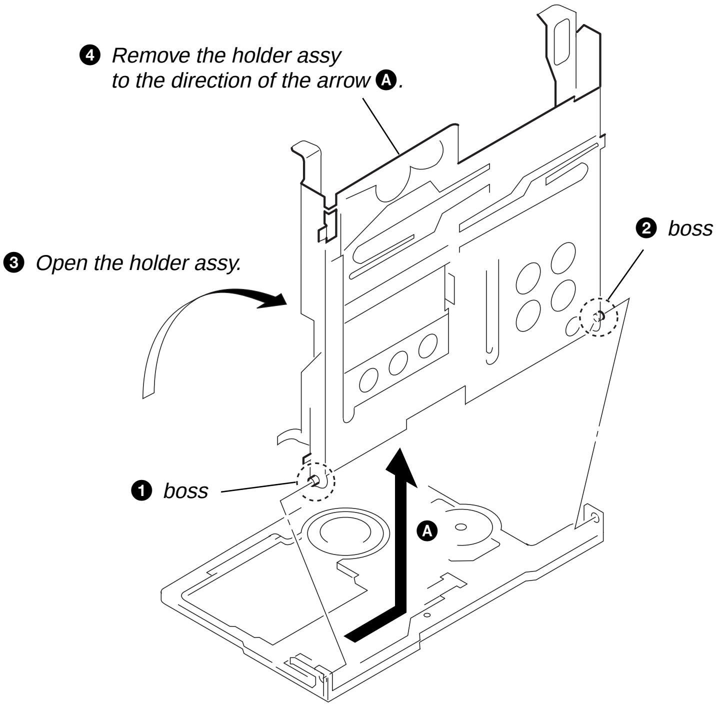
3-8. OP SERVICE ASSY



3-9. DC MOTOR SSM18D/C-NP (SPINDLE) (M701), DC MOTOR (SLED) (M702), DC MOTOR UNIT (OVER WRITE HEAD UP/DOWN) (M703)

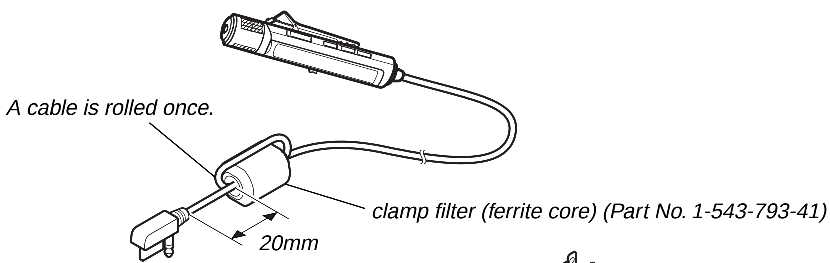


3-10. HOLDER ASSY

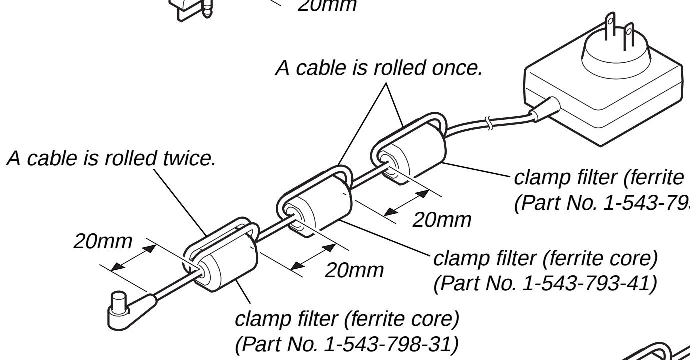


3-11. POSITION OF FERRITE CORE

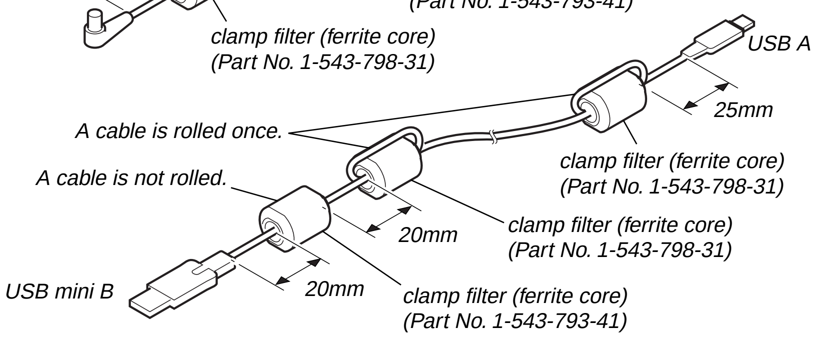
-REMOTE COMMANDER-



-AC ADAPTOR-



-USB CABLE-



SECTION 4
TEST MODE

OUTLINE

A key having no particular description in the text, indicates a set key.

1. ENTERING THE TEST MODE

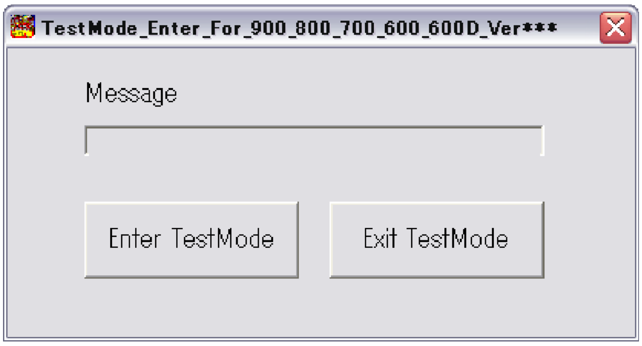
Preparation:

Copy the “TestMode_Enter_For_900_800_700_600_600D_Ver***.exe” folder of the PC application of the latest version to your PC in advance. (operating system: Windows 2000, Windows XP)

Also, when using this application, the SonicStage Ver. 2.0 or 2.1 is necessary, and install it in your PC in advance.

Procedure:

1. If a Simple Burner has run on the PC, finish it (including the one that is resident in the task tray).
2. Start the “TestMode_Enter_For_900_800_700_600_600D_Ver***.exe”.
3. Insert the fully charged Ni-MH rechargeable battery (NH-10WM).
4. Open and close the top panel of the main unit to wait until the system reading finished.
5. Connect the main unit and PC by USB cable.
6. Check by device manager screen from property of “My computer” that the set is recognised to your PC normally.
7. Click the [Enter TestMode] button on the screen of application
8. Disconnect the USB cable, when “OK” message is displayed on the application screen.
9. Remove the battery.



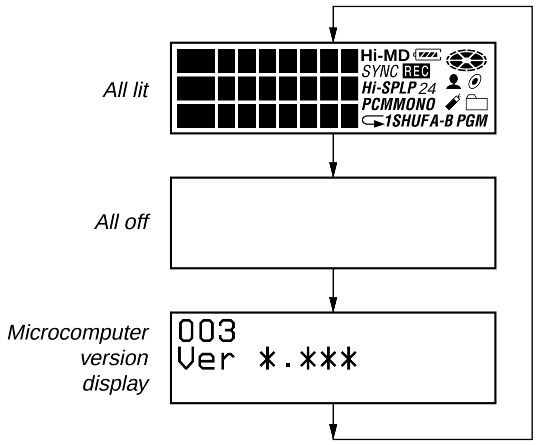
Screen of the PC application “TestMode_Enter_For_900_800_700_600_600D_Ver***.exe”
(“***” is version number)

Note: Once the test mode is activated with this application, the test mode is then activated forcibly by only turning on the power.
After the repair completed, be sure to release the test mode by using this application once more.

2. OPERATION IN SETTING THE TEST MODE

- When the test mode becomes active, first the Display Check mode is selected.
- Other mode can be selected from the Display Check mode.
- When the test mode is set, the LCD repeats the following display.

Display check mode:



“*.***”: Microcomputer version

- When the [II] key is pressed and hold down, the display at that time is held so that display can be checked.

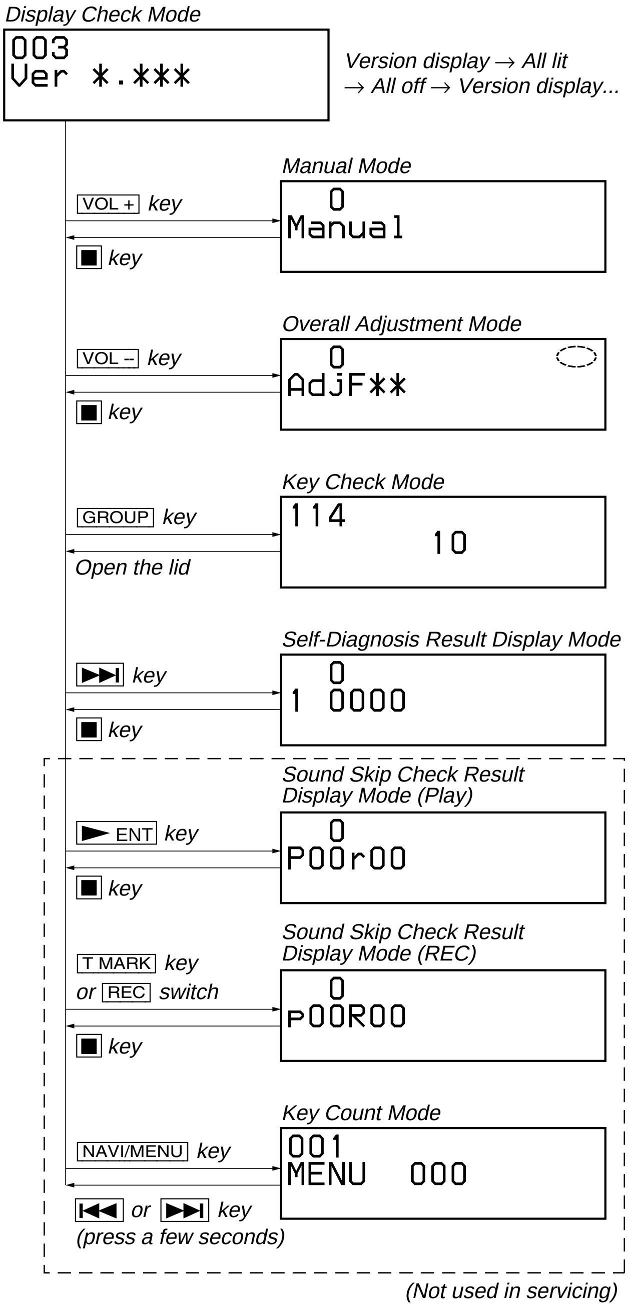
3. RELEASING THE TEST MODE

Procedure:

1. If a Simple Burner has run on the PC, finish it (including the one that is resident in the task tray).
2. Start the “TestMode_Enter_For_900_800_700_600_600D_Ver***.exe”.
3. Insert the fully charged Ni-MH rechargeable battery (NH-10WM).
4. Open and close the top panel of the main unit to wait until the system reading finished.
5. Connect the main unit and PC by USB cable.
6. Check by device manager screen that the set is recognised to your PC normally.
7. Click the [Exit TestMode] button on the screen of application
8. Disconnect the USB cable, when “OK” message is displayed on the application screen.
9. Remove the battery.

4. CONFIGURATION OF THE TEST MODE

Flow of the test mode:

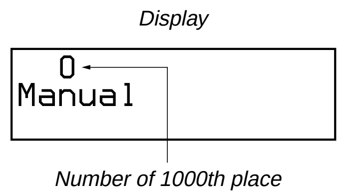


5. MANUAL MODE

This is mode to adjust or check the operation of the set by function.

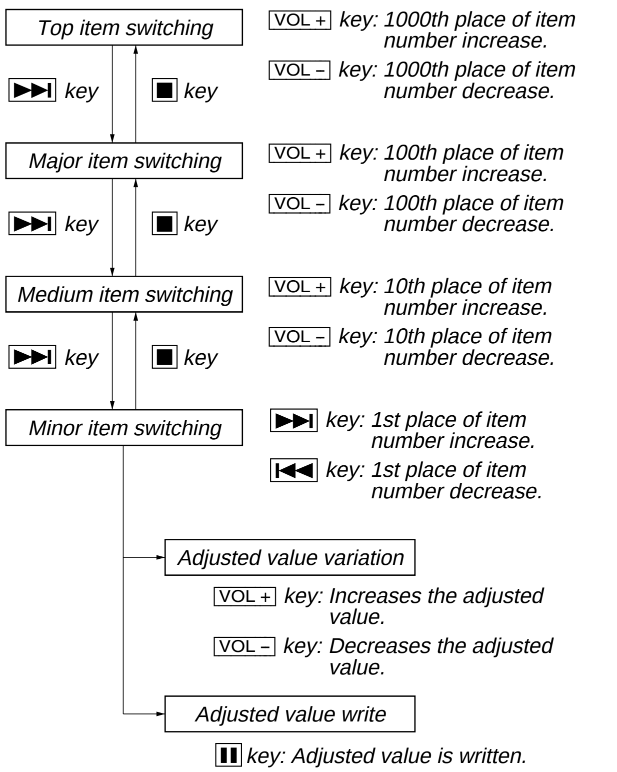
Operation of The Manual Mode

1. Enter the test mode (Display Check mode).
2. Press the [VOL+] key to activate the Manual mode where the LCD displays as shown below.



3. During each test, the optical pick-up moves outward or inward while the [▶▶I] or [I◀◀] key is pressed for several seconds respectively.
4. Each test item is assigned with a four-digit item number; 1000th place is a top item, 100th place is a major item, 10th place is a medium item, and unit place is a minor item.
   The values adjusted in the test mode are written to the non-volatile memory (for the items where adjustment was made).
5. To quit the Manual mode, press the [■] key and return to the Display Check mode.

Flow of manual mode operation:

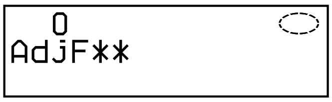


6. OVERALL ADJUSTMENT MODE

6-1. Operation of The Overall Adjustment Mode

1. Enter the test mode (Display Check mode).
2. Press the [VOL–] key to activate the Overall Adjustment mode where the LCD displays as shown below.

Display



Disc mark:

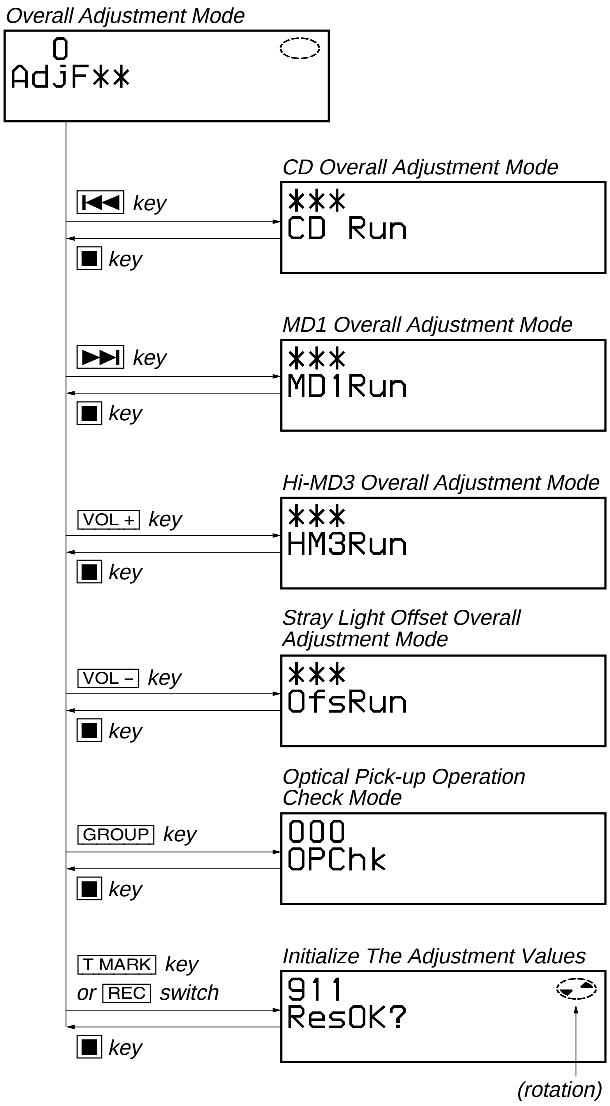
Lit the inner segments: Completed the power supply adjustment.
Lit the outer segments: Completed the charge function check.

"":**

If "DF" or "FF" is displayed, it mean that completed the servo overall adjustment.

3. To quit the Overall Adjustment mode, press the [■] key and return to the Display Check mode.

Flow of overall adjustment mode:



6-2. Error Message in The Overall Adjustment Mode

In the Overall Adjustment mode, if an error occurred, it displays as following table.

Display	Description
Close!	Dose not close the lid
DfDis!	Unsuitableness disc was inserted
NoChg!	Does not finish the charge function check
NoTmp!	Does not setting the temperature correction value
NotCD!	Does not complete the CD Overall adjustment beforethe MD1 Overall adjustment
NotM1!	Does not complete the MD1 Overall adjustment before the Hi-MD3 Overall adjustment
NotH3!	Does not complete the Hi-MD3 Overall adjustment before the Stray Light Offset Overall adjustment
****NG	Error of item number "****"

7. SELF-DIAGNOSIS RESULT DISPLAY MODE

This set uses the self-diagnostic function system in which if an error occurred during the recording or playing, the mechanism control block and the power supply control block in the microcomputer detect it and record its cause as history in the nonvolatile memory. By checking this history in the test mode, you can analyze a fault and determine its location.
Total recording time is recorded as a guideline of how long the optical pick-up has been used, and by comparing it with the total recording time at the time when an error occurred in the self-diagnosis result display mode, you can determine when the error occurred.
Clear the total recording time, if the optical pick-up was replaced.

7-1. Operation of The Self-Diagnosis Result Display Mode

1. Enter the test mode (Display Check mode).
2. Press the [⏭] key to activate the Self-Diagnosis Result Display mode where the LCD displays as shown below.

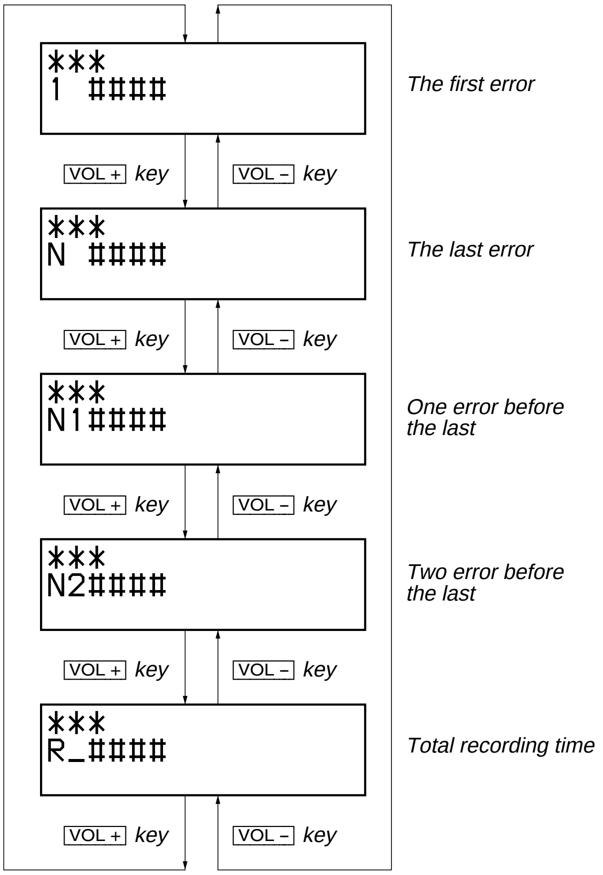
Display



"***" : Error code
"$$" : Error history code
"####" : Total recording time

3. To quit the Self-Diagnosis Result Display mode, press the [■] key and return to the Display Check mode.

Flow of Self-diagnosis Result Display mode operation:



7-2. Error Code of The Self-Diagnosis Result Display Mode

Error code	Description
00	No error
01	Attempt to access an abnormal address
02	High temperature detected
03	Focus error (no change)
04	Abnormal rotation of disc
05	Fault of disc discriminate
06	Error of access loop (no change)
07	Error of access loop (with change)
08	Could not read address
09	Focus error (with change)
12	Could not read data with SYNC
13	TOC address data error
32	Focus error, ABCD offset error
33	Tracking error, offset error
34	Tracking error, X1 tracking error, offset error

7-3. Clear The Total Recording Time

After replacing the optical pick-up, clear the total recording time.

1. Enter the test mode (Display Check mode).
2. Press the [▶▶I] key to activate the Self-Diagnosis Result Display mode.
3. Press the [VOL–] key once to display the total recording time indication.
4. Press the [II] key and display “ClrOK?”.
5. Press the [II] key again to display “RecT 0” and clear the total recording time.

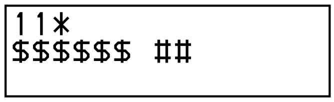
8. KEY CHECK MODE

This mode is used for key check.

Operation of The Key Check Mode

1. Enter the test mode (Display Check mode).
2. Press the [GROUP] key to activate the Key Check mode where the LCD displays as shown below.

Display



“*” : Remote commander (0: with, 4: without)
“$$$$$$” : Pressed key name.
When remote commander key is pressed, display becomes as “r$$$$$”.
When the jog dial is turned, it displays “JOG+ X” or “JOG– X” (“X” is number of 1 to 3). If the jog dial is turned four click, it displays “JOG+OK” or “JOG–OK”.
“##” : Key voltage of remote commander. (Hexadecimal number)

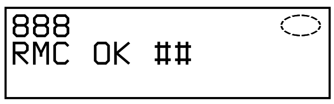
3. When all keys (*1) check is OK on the main unit, it displays as follows.

Display



When all keys (*1) check is OK on the remote commander, it displays as follows.

Display



*1) Turn the jog dial four click clockwise and counterclockwise to jog test is OK.

4. When all keys check are OK both the main unit and the remote commander, it display backs to the Display Check mode automatically.
5. To quit the Key Check mode, open the lid and return to the Display check mode.

SECTION 5
ELECTRICAL ADJUSTMENTS

1. PRECAUTIONS FOR ADJUSTMENT

1. Adjustment must be done in the test mode only. After adjusting, release the test mode. A key having no particular description in the text, indicates a set key.
2. Use the following tools and measuring instruments.
   - Digital voltmeter
   - Regulated dc power supply (two sets)
   - Thermometer (using the Temperature Correction)
   - Laser power meter
   - CD adjustment disc TDYS-1 (Part No. : 4-963-646-01)
   - MD1/HiMD1 hybrid adjustment disc MDW-74/GA1 (Part No. : 4-229-747-01)
   - Hi-MD3 adjustment disc HMD1GSDJ (Part No. : 7-819-098-37) *1
   - Remote commander in accessories (with LCD)
   - Battery charging stand and AC adapter in accessories
   - Ni-MH rechargeable battery (NH-10WM) in accessories (full charged)
   - PC application software for test mode "TestMode_Enter_For_900_800_700_600_600D_Ver***.exe" *2
   - USB cable

   *1) Hi-MD3 adjustment disc (HMD1GSDJ) is consumable. Therefore if it is used 400 times, exchange it for a new.
   *2) Use the newest version every time.
   Copy the whole folder of this program to your PC.
   Operating system: Windows 2000, Windows XP
   When using this application, the SonicStage Ver. 2.0 or 2.1 is necessary, and install it in your PC in advance.

3. Unless specified otherwise, supply DC 1.5 V from battery terminals (CL431: BATT+, CL432: BATT–).

2. ADJUSTMENT SEQUENCE

Adjustment must be done with the following order.

Adjustment order:

1. Entering the test mode
2. Initialize the adjustment value
3. Setting the temperature correction value
4. Power supply voltage adjustment
5. Charge function check
6. Laser power check
7. Setting the adjustment values
8. Servo Overall adjustment
9. Resume clear
10. Releasing the test mode

3. ADJUSTMENT OF THE EACH ITEM

3-1. Entering The Test Mode

Refer to the "SECTION 4. TEST MODE".

3-2. Initialize The Adjustment Value

Procedure:

1. In the test mode (Display Check mode), press the [VOL–] key to enter the Overall adjustment mode.
2. Press the [T MARK] key and display "911 ResOK?".
3. Press the [II] key to display "911 Reset!" and initialize the adjustment values.
4. Press the [■] key and back to Display Check mode.

3-3. Setting The Temperature Correction Value

Procedure:

1. In the test mode (Display Check mode), press the [VOL+] key to enter the Manual mode.
2. Press the [▶▶I] key twice, and press the [VOL+] key twice to display as follows.

Display

```
130
Temp
```

3. Press the [▶▶I] key once to select the item number 0131 and display as follows.

Display

```
131
###S**
```

adjustment value (hexadecimal)

4. Measure the ambient temperature.
5. Adjust with [VOL+]/[VOL–] keys so that the adjusted value (hexadecimal value) becomes the ambient temperature. (example: 25 °C = 19h)
6. Press the [II] key to write the adjusted value.
7. Press the [■] key four times and back to the Display Check mode.

3-4. Power Supply Voltage Adjustment

Adjustment must be done with the following order.

3-4-1. Setting

Procedure:

1. Enter the test mode (Display Check mode), and make sure that the power supply voltage is 1.2 V.
2. Press the [VOL+] key to enter the Manual mode.
3. Press the [VOL+] key twice to display as follows.

Display

```
  2
POWER
```

4. Press the [▶▶I] key once, press the [VOL+] key once, and press the [▶▶I] key once again to display as follows.

Display

```
210
PwrAdj
```

5. Repeat the next procedures (3-4-2. PwrAdj Adjustments), and adjust all contents of "table 3-4-1. PwrAdj Specifications".

3-4-2. PwrAdj adjustments

Repeat the following procedures and adjust all contents of "table 3-4-1. PwrAdj Specifications".

Example Display (Item No. 2211)

```
211
 AD **
```

adjustment value (hexadecimal)

Procedure:

1. Connect the digital voltmeter to measuring point (refer to the following table) and ground (CL433).
2. Press the [▶▶I] key to change the item number.
3. Adjust with [VOL+]/[VOL–] keys so that the value of digital voltmeter becomes specification value.
4. Press the [II] key to write the adjusted value.
5. Press the [▶▶I] key to select the next item.
6. Repeat adjustment from step 1 until item number 2233.

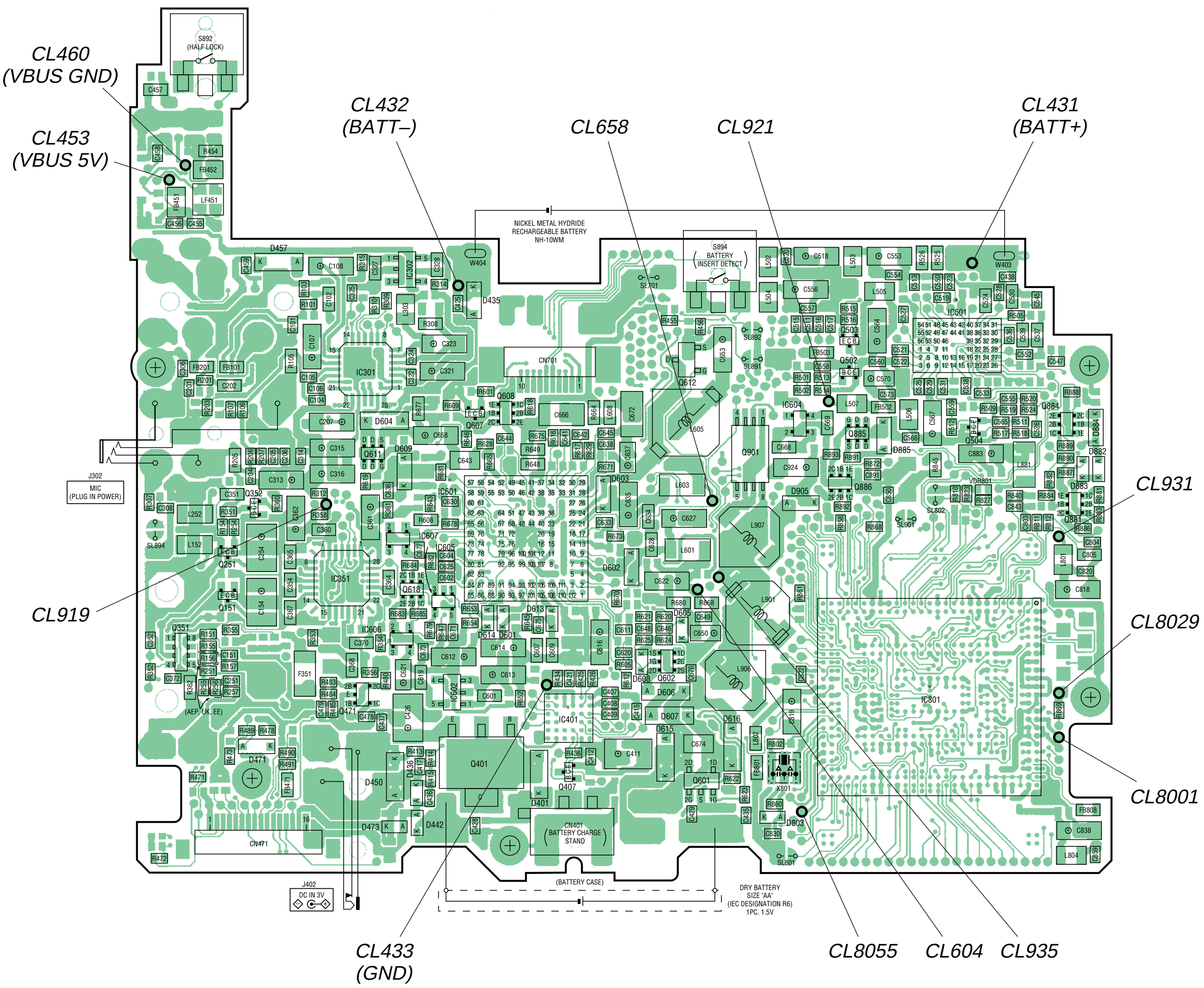
ItemNo.	Display	Specification value	Measuring point
2211	211 AD ✱✱	2.05 V + 0.02 V	CL8029
2212	212 AD ✱✱	2.25 V ± 0.01 V	CL8029
2213	213 AD ✱✱	1.20 V + 0.01 V	CL8001
2214	214 AD ✱✱	3.10 V ± 0.015 V	CL658
2215	215 AD ✱✱	3.10 V ± 0.015 V	CL658
2216	216 AD ✱✱	3.02 V ± 0.02 V	CL919
2217	217 AD ✱✱	3.02 V ± 0.02 V	CL919
2218	218 AD ✱✱	2.275 V ± 0.01 V	CL921
2219	219 AD ✱✱	2.480 V ± 0.01 V	CL921
2221	221 AD ✱✱	2.740 V ± 0.01 V	CL921
2222	222 AD ✱✱	2.985 V ± 0.01 V	CL921
2223	223 AD ✱✱	2.52 V ± 0.02 V	CL931
2224	224 AD ✱✱	0.89 V ± 0.02 V	CL604
2225	225 AD ✱✱	1.08 V ± 0.02 V	CL604
2226	226 AD ✱✱	1.52 V ± 0.02 V	CL604
2227	227 AD ✱✱	2.27 V ± 0.02 V	CL604
2228	228 AD ✱✱	2.97 V ± 0.02 V	CL604
2229	229 AD ✱✱	0.94 V ± 0.02 V	CL604
2231	231 AD ✱✱	1.28 V ± 0.02 V	CL604
2232	232 AD ✱✱	2.57 V ± 0.02 V	CL604
2233	233 AD ✱✱	2.57 V ± 0.02 V	CL604

Note1: "✱✱" is adjustment value (hexadecimal number).
Note2: Ground point of all measuring points is CL433.

Table 3-4-1. PwrAdj Specifications

Adjustment Location:

– MAIN BOARD (Conductor Side) –



3-4-3. VBsAdj adjustments

Procedure:

1. In the “3-4-2. PwrAdj Adjustments” completed status, press the [▶▶I] key to display as follows.

Display

```
240
VBsAdj
```

2. Apply the voltage of 5 V to the CL453 (VBUS 5V) and CL460 (VBUS GND).
3. Press the [▶▶I] key to change the item number to 2241.
4. Adjust with [VOL+]/[VOL–] keys so that the value of digital voltmeter becomes specification value. (refer to “table 3-4-2. VBsAdj Specifications”)
5. Press the [II] key to write the adjusted value.
6. Press the [▶▶I] key to select the next item, and repeat adjustments to item number 2243 at the same manner as step 3 to step 5.

Item No.	Display	Specification value	Measuring point
2241	241 AD ✱✱	1.13 V ± 0.01 V	CL8001
2242	242 AD ✱✱	2.05 V + 0.02 V	CL8029
2243	243 AD ✱✱	3.30 V ± 0.01 V	CL8055

Note1: “✱✱” is adjustment value (hexadecimal number).
Note2: Ground point of all adjustment points is CL433.
Note3: Refer to page 18 for adjustment location.

Table 3-4-2. VBsAdj Specifications

7. Press the [▶▶I] key to select the item number 2244, and turn off the power supply of battery terminal.
8. Adjust with [VOL+]/[VOL–] keys so that the voltage of between CL935 and CL433 (GND) becomes 1.80 V (– 0.02 V).
9. Press the [II] key to write the adjusted value.
10. Apply the voltage of 1.2 V to the battery terminal again.
11. Press the [■] key to display “240 VBsAdj” (Item number: 2240).
12. Turn off the voltage of 5 V to the CL453 (VBUS 5V) and CL460 (VBUS GND).
13. Press the [■] key three times and back to the Display Check mode.

3-5. Charge Function Check

Note: When perform this check, don’t apply a voltage to battery terminals.

Procedure:

1. Connect the digital voltmeter to CL431 (BATT+) and CL433 (GND).
2. Enter the test mode using the AC adapter.
3. Press the [VOL+] key to enter the Manual mode.
4. Press the [VOL+] key twice to display as follows.

Display

```
  2
POWER
```

5. Press the [▶▶I] key once, press the [VOL+] key once, press the [▶▶I] key once, press the [VOL+] key three times, and press the [▶▶I] key once to display as follows.

Display

```
261
 AD ✱✱
```

adjustment value (hexadecimal)

6. Adjust with [VOL+]/[VOL–] keys so that the value of digital voltmeter becomes 1.80 V.
7. Press the [II] key to write the adjusted value.
8. Press the [▶▶I] key to select the next item.
9. Disconnect the digital voltmeter.
10. Press the [▶▶I] key to select the next item (2262) and display “262 AD CC”.
11. Press the [II] key and confirm that the adjustment value changes from “CC” to “DD”.
    If it changes to “BB”, IC401 (for charge IC) is fault.
12. Press the [▶▶I] key to select the next item (2263) and display “263 AD CC”.
13. Press the [II] key and confirm that the adjustment value changes from “CC” to “DD”.
    If it changes to “BB”, IC401 (for charge IC) is fault.
14. Disconnect the power supply (AC adaptor).
15. Connect the resistor of the specified value (see table below) to the battery terminals (CL431: BATT+, CL432: BATT–), and then connect the AC adapter again, and enter the test mode.
16. Select item number 2264 through the operation similar to steps 2 to 8.
17. Press the [II] key and confirm that the adjustment value changes from “CC” to “DD”.
    If it changes to “BB”, IC401 (for charge IC) is fault.
18. In the same manner, exchange the resistors with the power supply disconnected, and confirm that the adjustment value is “CC” in each item number.

Note: Be sure to disconnect the AC adapter when exchanging the resistors. Doing so with the power supply connected causes a trouble.

Item No.	Display	Connecting Resistor
2262	262 AD ✱✱	No resistor
2263	263 AD ✱✱	No resistor
2264	264 AD ✱✱	22 Ω (0.1 watts or more)
2265	265 AD ✱✱	10 Ω (1.0 watts or more)
2266	266 AD ✱✱	10 Ω (1.0 watts or more)
2267	267 AD ✱✱	2.2 Ω (1.5 watts or more)

Table 3-5-1. Charge Adjustment Specifications

3-6. Laser Power Check

Procedure:

1. In the test mode (Display Check mode), press the [VOL+] key to enter the Manual mode.
2. Open the lid and press the [I◀◀] key continuously until the optical pick-up moves to the most inward track.
3. Set the laser power meter so that the laser beam from the optical pick-up aims at the objective lens of laser power meter at right angle.
4. Press the [VOL–] key once to display as follows.

Display

```
   9
DESIGN
```

5. Press the [▶▶I] key three times to select the item number 9111 and display as follows.

Display

```
111
###S**
```

6. Confirm that the value of laser power meter is 0.67 mW ± 21%.
7. Press the [▶▶I] key to select the item number 9112.
8. Confirm that the value of laser power meter is 0.76 mW ± 18%.
9. Press the [▶▶I] key to select the item number 9113.
10. Confirm that the value of laser power meter is 6.25 mW ± 12%.
11. Press the [■] key four times and back to the Display Check mode.

3-7. Setting The Adjustment Values

3-7-1. Hi-MD3 setting

Preparation:

1. Perform calculation every item based on the data given by the Hi-MD3 adjustment disc by referring to the following table. (Round off the value in decimal place)
2. Convert the calculated value into hexadecimal number.

Note: The Hi-MD3 adjustment parameters vary depending on the disc, and therefore use the parameters of the disc used when performing the adjustment.

Item No.	Calculating formula (*3)
0211	Pr_nominal / 0.05
(*1)	Por / 0.05
0212	Kr × (–100)
0213	Pw_nominal / 0.05
(*2)	Ppw / 0.05
0214	Kw × (–100)
0215	Prmin / 0.05
0216	Pwmin / 0.05

*1) If the “Pr_nominal” value is indicated, use the “Pr_nominal” value and not used “Por” value.
*2) If the “Pw_nominal” value is indicated, use the “Pw_nominal” value and not used “Ppw” value.
*3) Round off after the decimal point.

Table 3-7-1. Hi-MD3 adjustment parameter

Example of Calculation:

Item No.	Parameter		Result	
			Decimal	Hexadecimal
0211	Pr_nominal	2.50 mW	50	32h
0212	Kr	–0.3 %/°C	30	1Eh
0213	Pw_nominal	7.35 mW	147	93h
0214	Kw	–0.4 %/°C	40	28h
0215	Prmin	1.9 mW	38	26h
0216	Pwmin	5.8 mW	116	74h

Procedure:

1. In the test mode (Display Check mode), press the [VOL+] key to enter the Manual mode.
2. Press the [▶▶I] key once, press the [VOL+] key once, and press the [▶▶I] key once again to display as follows.

Display

```
210
DiscPr
```

3. Press the [▶▶I] key once to select the item number 0211.
4. Adjust with [VOL+]/[VOL–] keys so that the adjustment value of LCD becomes calculated value.
5. Press the [II] key to write the adjusted value.
6. Press the [▶▶I] key to next item.
7. Repeat adjustment from step 4 until item number 0216.

3-7-2. Other setting

1. In the test mode (Display Check mode), press the [VOL+] key to enter the Manual mode.
2. Press the [▶▶I] key five time to select the item number 0113 and display as follows.

Display

```
113
###S**
```

adjustment value (hexadecimal)

3. Press the [VOL+]/[VOL–] key and set the according value to each model type and destination referring to the following table.
4. Press the [II] key to write the adjusted value.

Destination	Adjustment value
US	41
Canadian, Australian	21
AEP, UK, East European	A1
E18, Hong Kong, Taiwan, Korean, Chinese, Tourist	25

• Abbreviation
E18: 100V - 240V AC area in E model

Table 3-7-2. Mode Type and Destination Setting

3-8. Servo Overall Adjustment

Note1: Be sure to adjustment so that the set is horizontal and the LCD is upside. Unless performed in that state, it is not adjusted correctly.

Note2: If NG is displayed in the middle of this adjustments, perform "3-2. Initialize The Adjustment Value" and "3-7. Setting The Adjustment Values" again, then retry this adjustments from step 1.

Procedure:

1. Insert the full charged Ni-MH rechargeable battery (NH-10WM), then open and close the lid and enter the test mode (Display Check mode).
2. Press the [VOL–] key to enter the Overall Adjustment mode.
3. Insert the CD adjustment disc (TDYS-1).
4. Put the main unit horizontal so that the LCD becomes upside, and press the [⏮] key.
5. Wait until "CD OK" is displayed on the LCD.
6. Insert the MD1/HiMD1 hybrid adjustment disc (MDW-74/GA1).
7. Put the main unit horizontal so that the LCD becomes upside, and press the [⏭] key.
8. Wait until "MD1 OK" is displayed on the LCD.
9. Insert the Hi-MD3 adjustment disc (HMD1GSDJ).
10. Put the main unit horizontal so that the LCD becomes upside, and press the [VOL+] key.
11. Wait until "HMD OK" is displayed on the LCD.
12. Eject the disc.
13. Put the main unit horizontal so that the LCD becomes upside, and press the [VOL–] key.
14. Wait until "OfstOK" is displayed on the LCD.
15. Press the [■] key and back to the Display Check mode.

3-9. Resume Clear

Procedure:

1. In the test mode (Display Check mode), press the [VOL+] key to enter the Manual mode.
2. Press the [VOL+] key once, press the [⏭] key once, press the [VOL–] key once, press the [⏭] key once, and press the [VOL+] key twice, press the [⏭] key three times to select the item number 1933.
3. Press the [❚❚] key to resume clear.
4. Press the [■] key four times and back to the Display Check mode. And remove the Ni-MH rechargeable battery.

3-10. Releasing The Test Mode

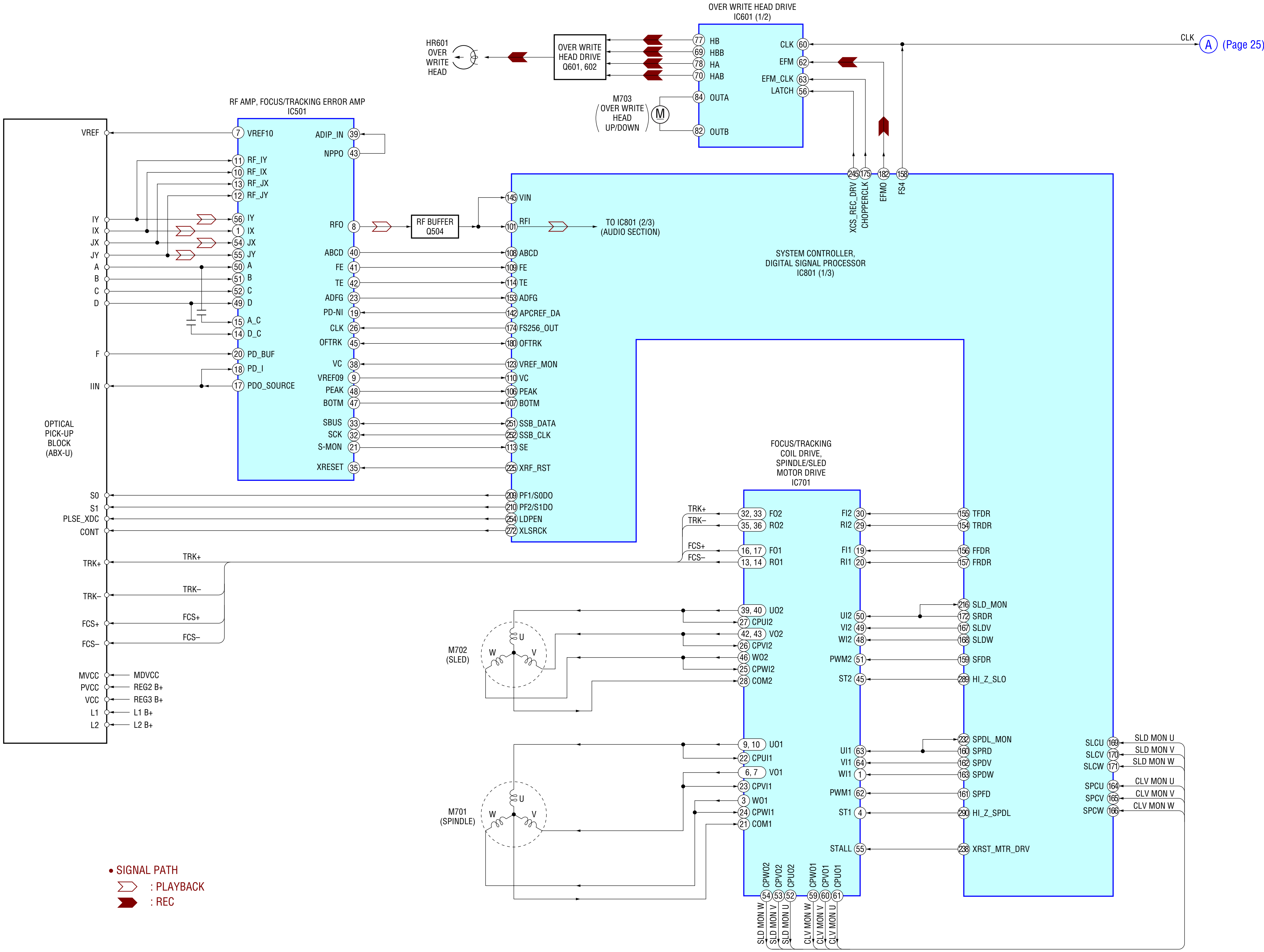
Refer to the "SECTION 4. TEST MODE".

Note: Once the test mode is activated with this application, the test mode is then activated forcibly by only turning on the power.
After the repair completed, be sure to release the test mode by using this application once more.

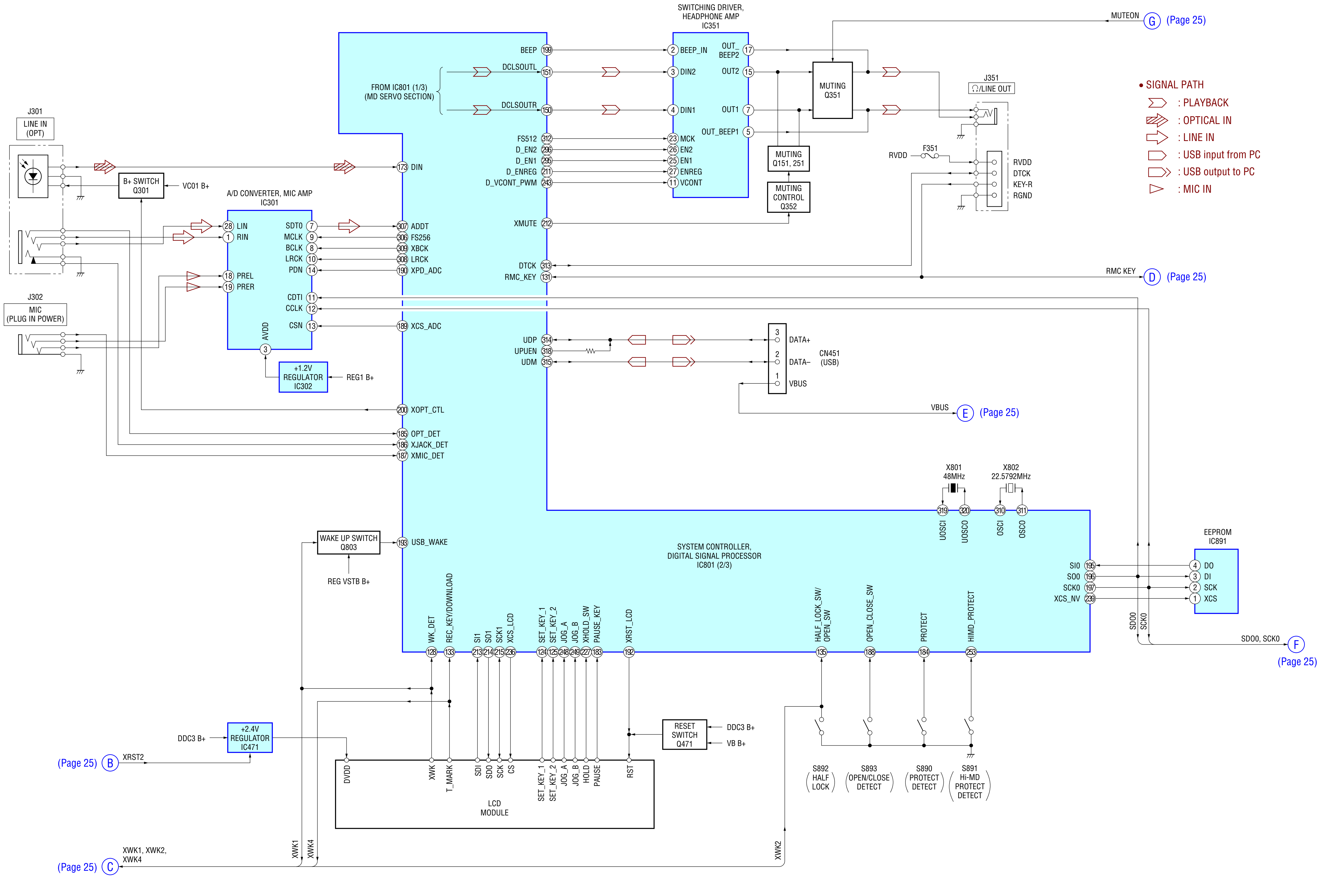
MEMO

SECTION 6
DIAGRAMS

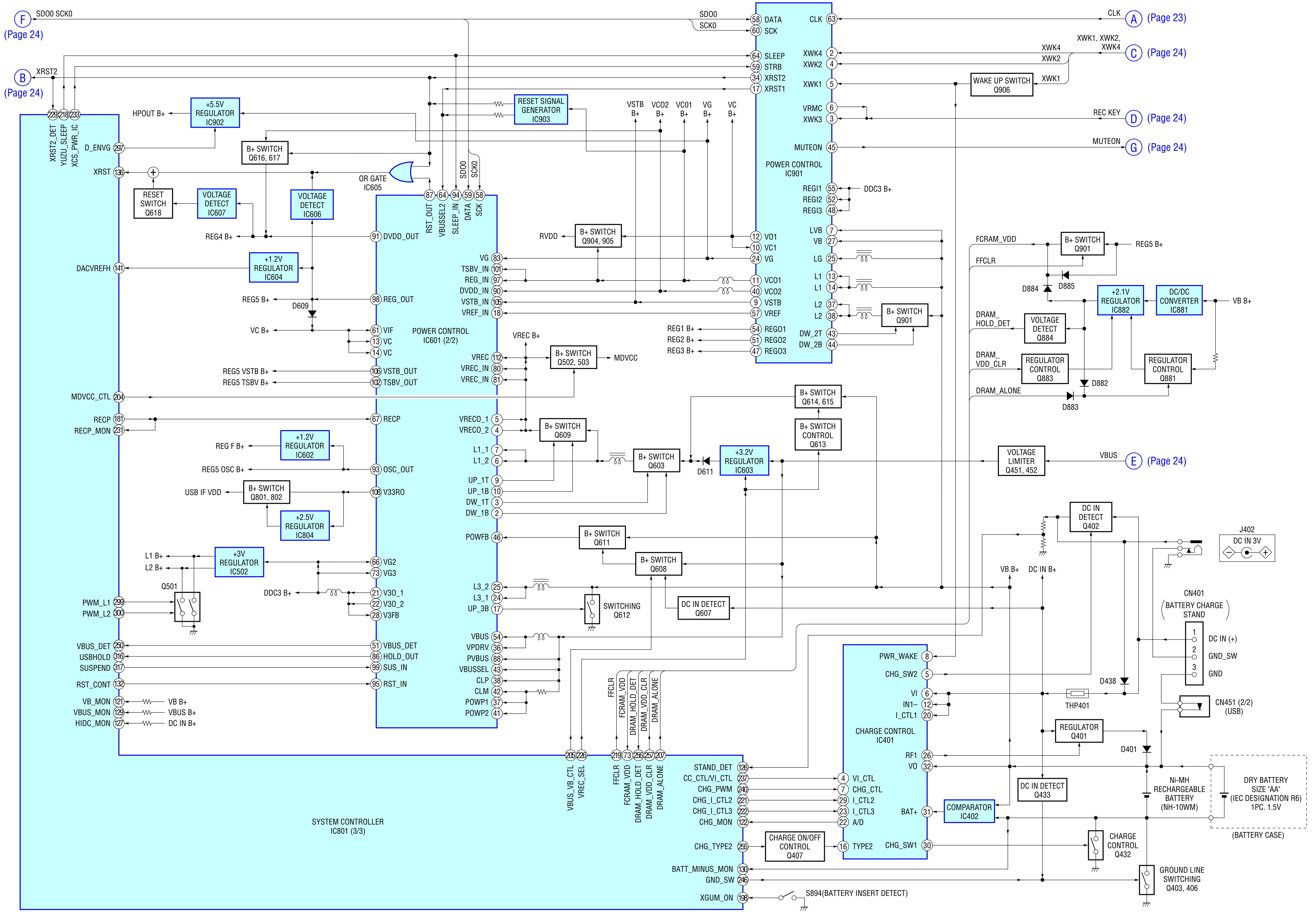
6-1. BLOCK DIAGRAM – MD SERVO Section –



6-2. BLOCK DIAGRAM – AUDIO Section –



6-3. BLOCK DIAGRAM – POWER SUPPLY Section –



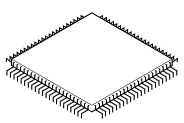
• Note For Printed Wiring Boards and Schematic Diagrams

Note on Printed Wiring Board:
- : parts extracted from the component side.
- : parts extracted from the conductor side.
- △ : internal component.
- : Pattern from the side which enables seeing.

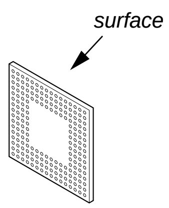
(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

- MAIN board is multi-layer printed board. However, the patterns of intermediate-layer have not been included in this diagrams.
- Lead Layouts



Lead layout of conventional IC



CSP (chip size package)

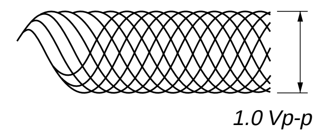
Note on Schematic Diagram:
- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line.
- Total current is measured with MD installed.
- Power voltage is dc 1.5 V and fed with regulated dc power supply from battery terminal.
- Voltages and waveforms are dc with respect to ground in playback mode.
  no mark : PLAYBACK
  * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : PLAYBACK
  : REC
  : OPTICAL IN
  : LINE IN
  : USB input from PC
  : USB output to PC
  : MIC IN
- Abbreviation
  EE : East European model

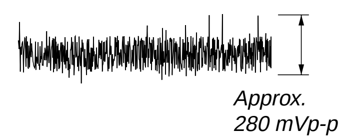
• Waveforms

① **IC501 ⑧ (RFO) (MD Play Mode)**



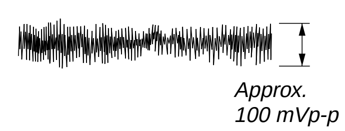
500 mV/DIV, 500 ns/DIV

② **IC501 ㊶ (FE) (MD Play Mode)**



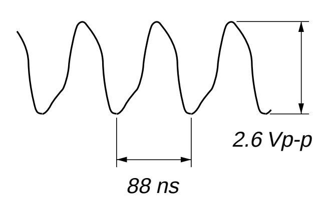
100 mV/DIV, 500 ns/DIV

③ **IC501 ㊷ (TE) (MD Play Mode)**



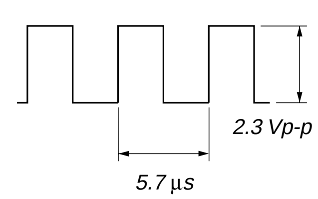
200 mV/DIV, 500 ns/DIV

④ **IC801 (158) (FS4)**



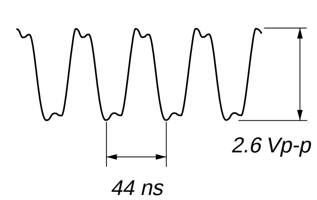
1 mV/DIV, 50 ns/DIV

⑤ **IC801 (174) (FS256_OUT)**



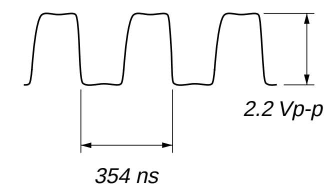
1 mV/DIV, 2 µs/DIV

⑥ **IC801 (311) (OSCO)**



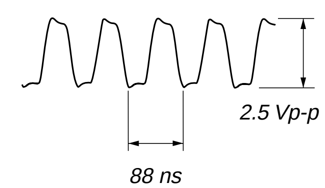
1 V/DIV, 20 ns/DIV

⑦ **IC301 ⑧ (BCLK)**



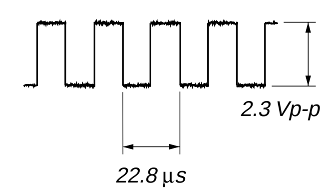
1 V/DIV, 100 ns/DIV

⑧ **IC301 ⑨ (MCLK)**



1 V/DIV, 50 ns/DIV

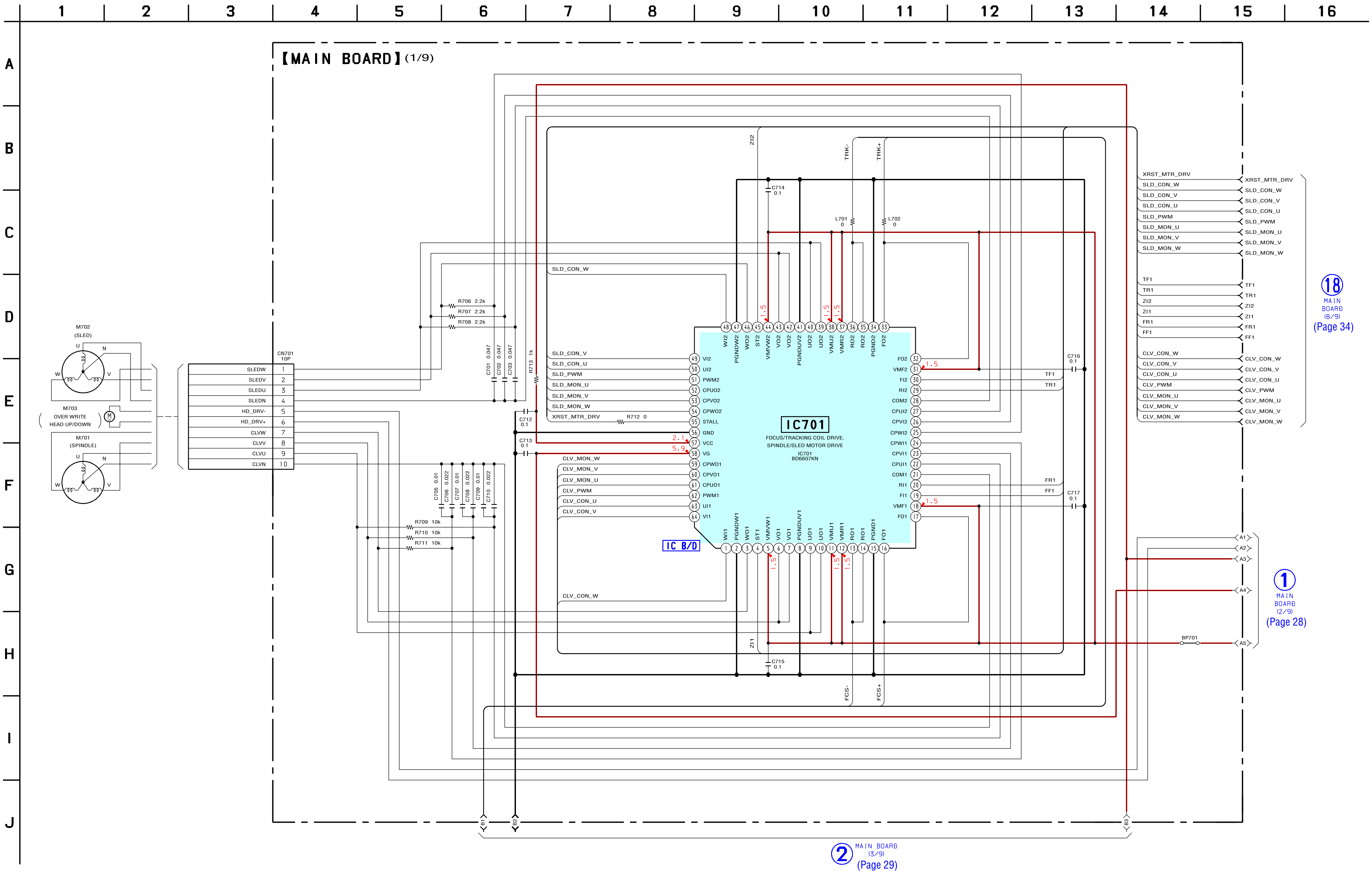
⑨ **IC301 ⑩ (LRCK)**



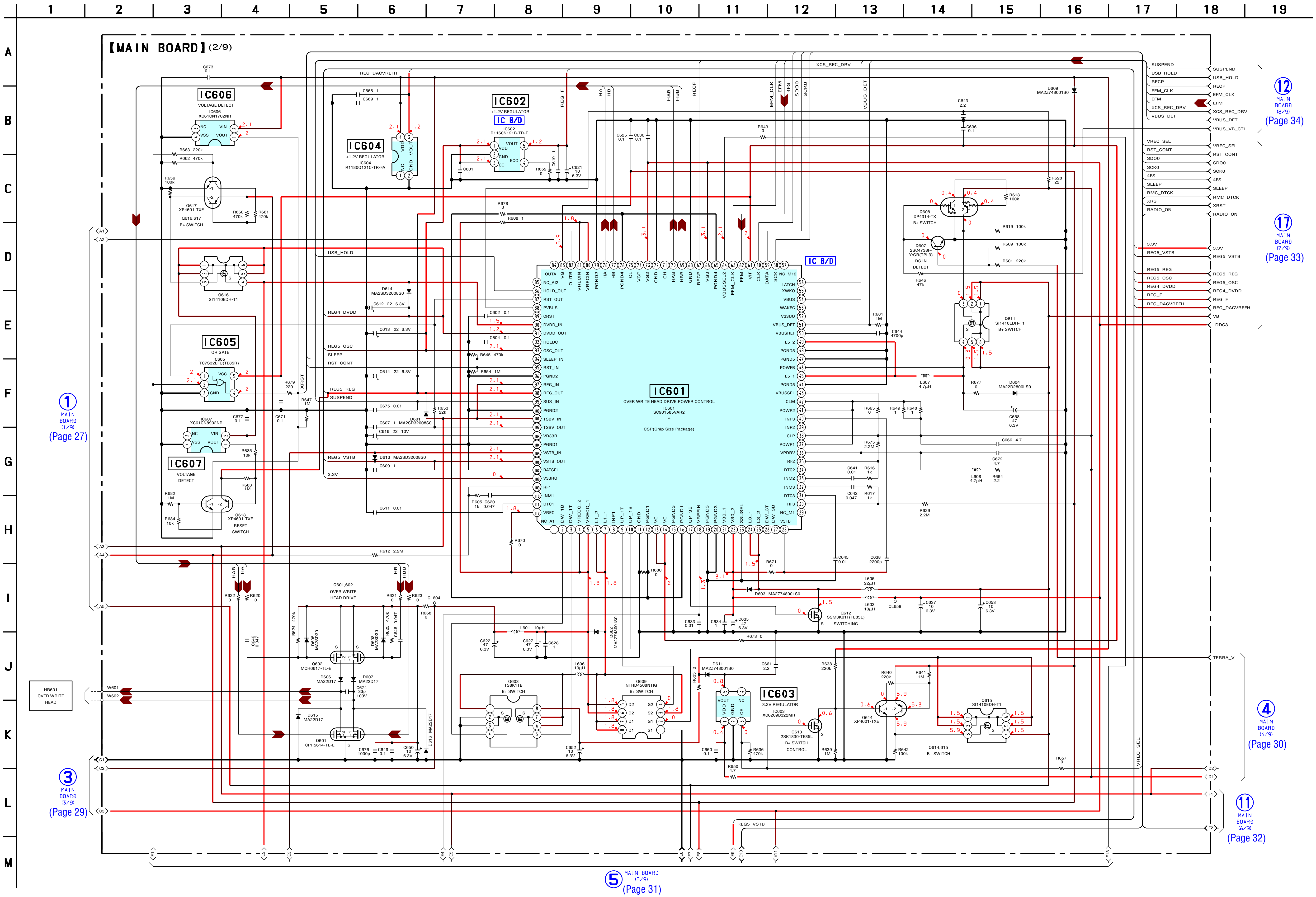
1 V/DIV, 10 µs/DIV

6-4. SCHEMATIC DIAGRAM – MAIN Section (1/9) –

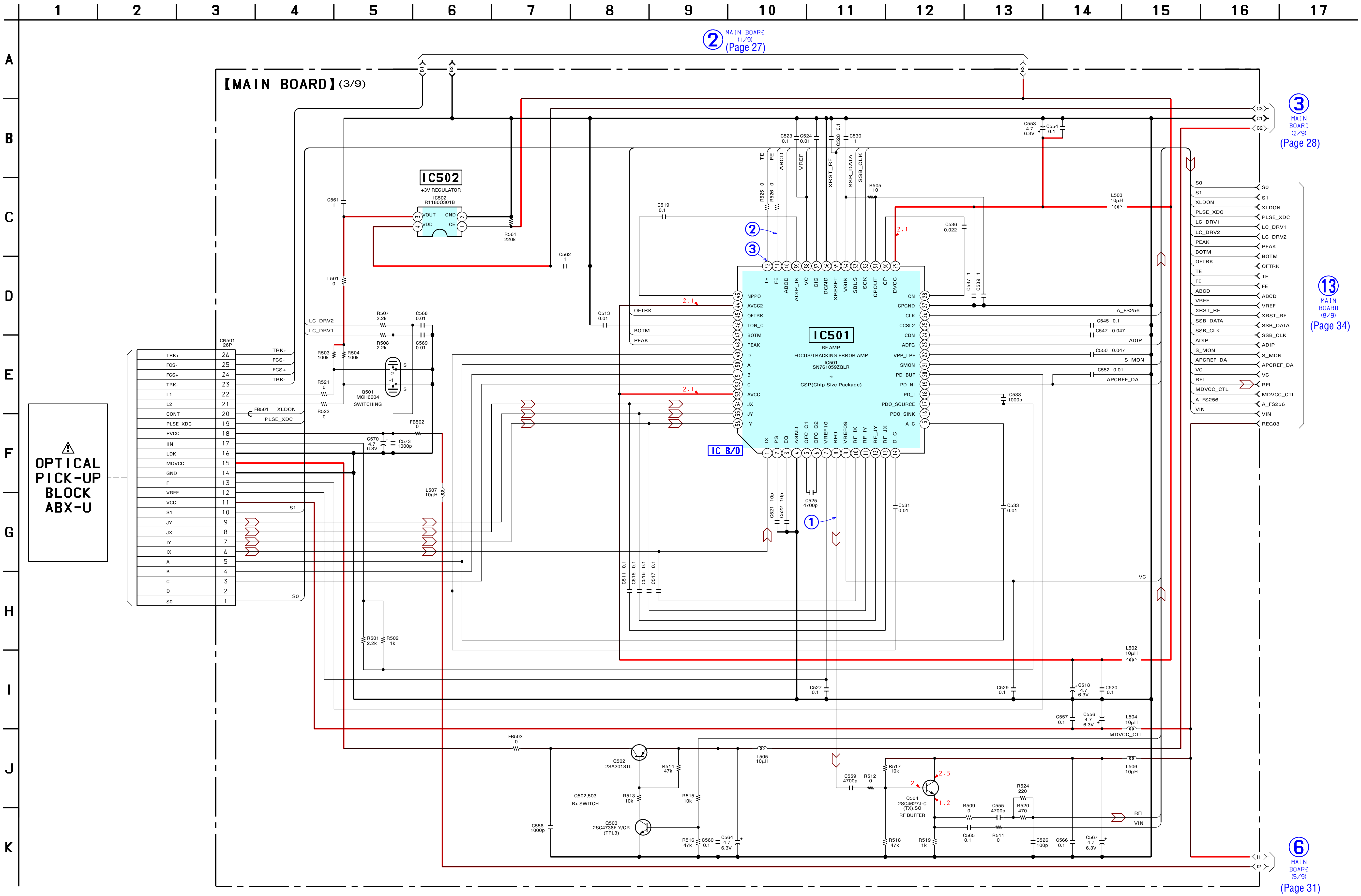
• See page 38 for IC Block Diagrams.



6-5. SCHEMATIC DIAGRAM – MAIN Section (2/9) – • See page 38 for IC Block Diagrams.

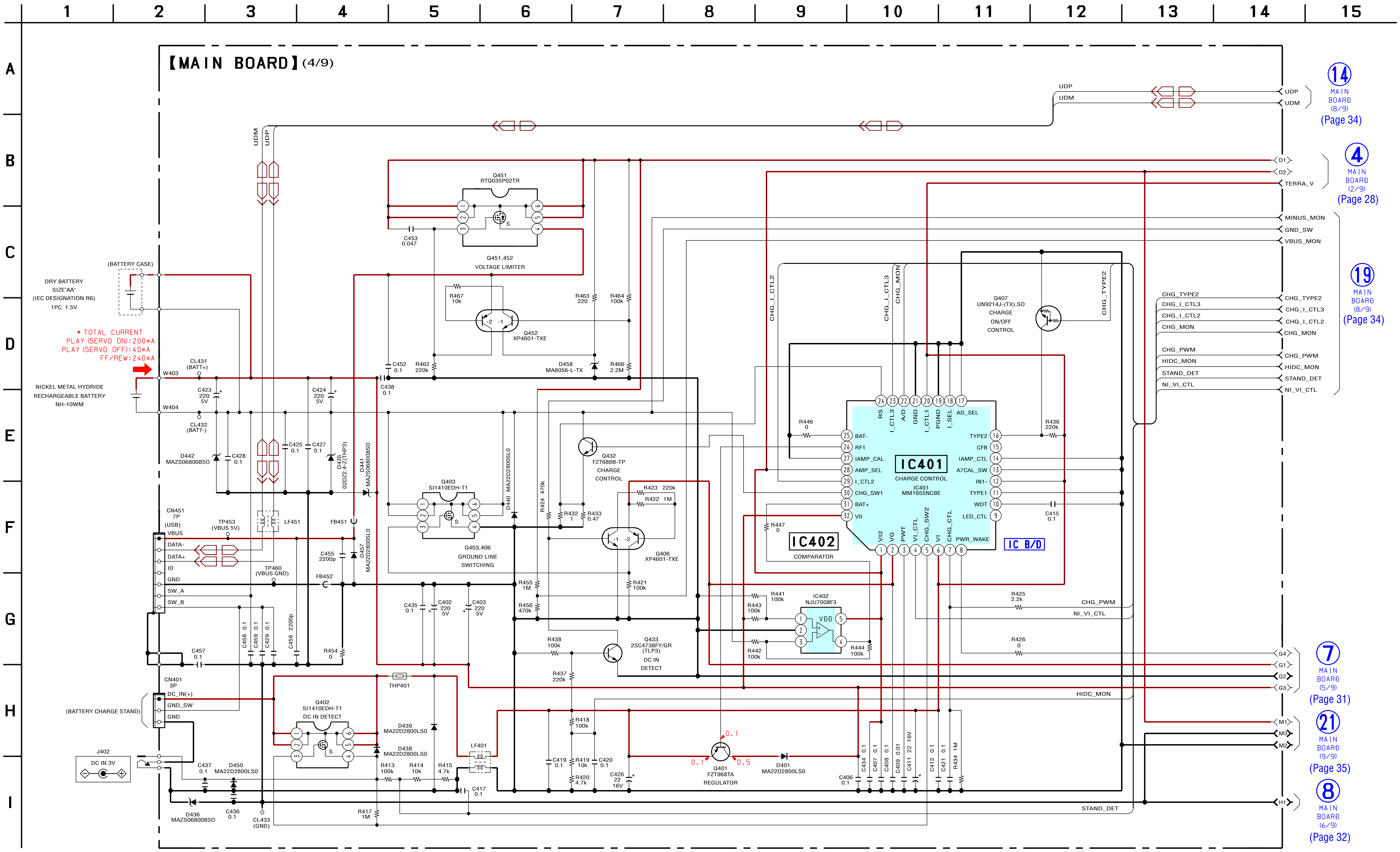


6-6. SCHEMATIC DIAGRAM – MAIN Section (3/9) – • See page 26 for Waveforms. • See page 38 for IC Block Diagrams.

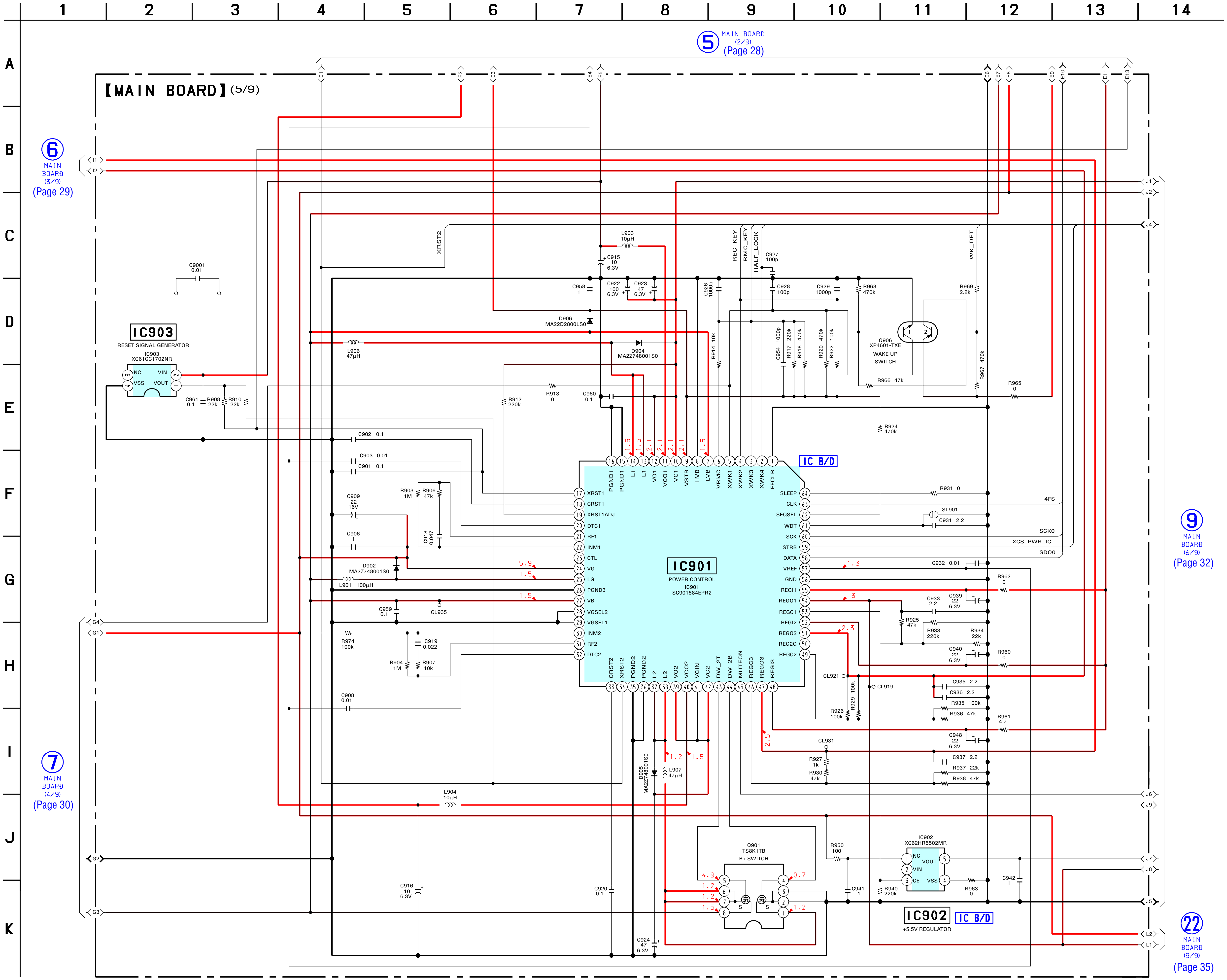


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

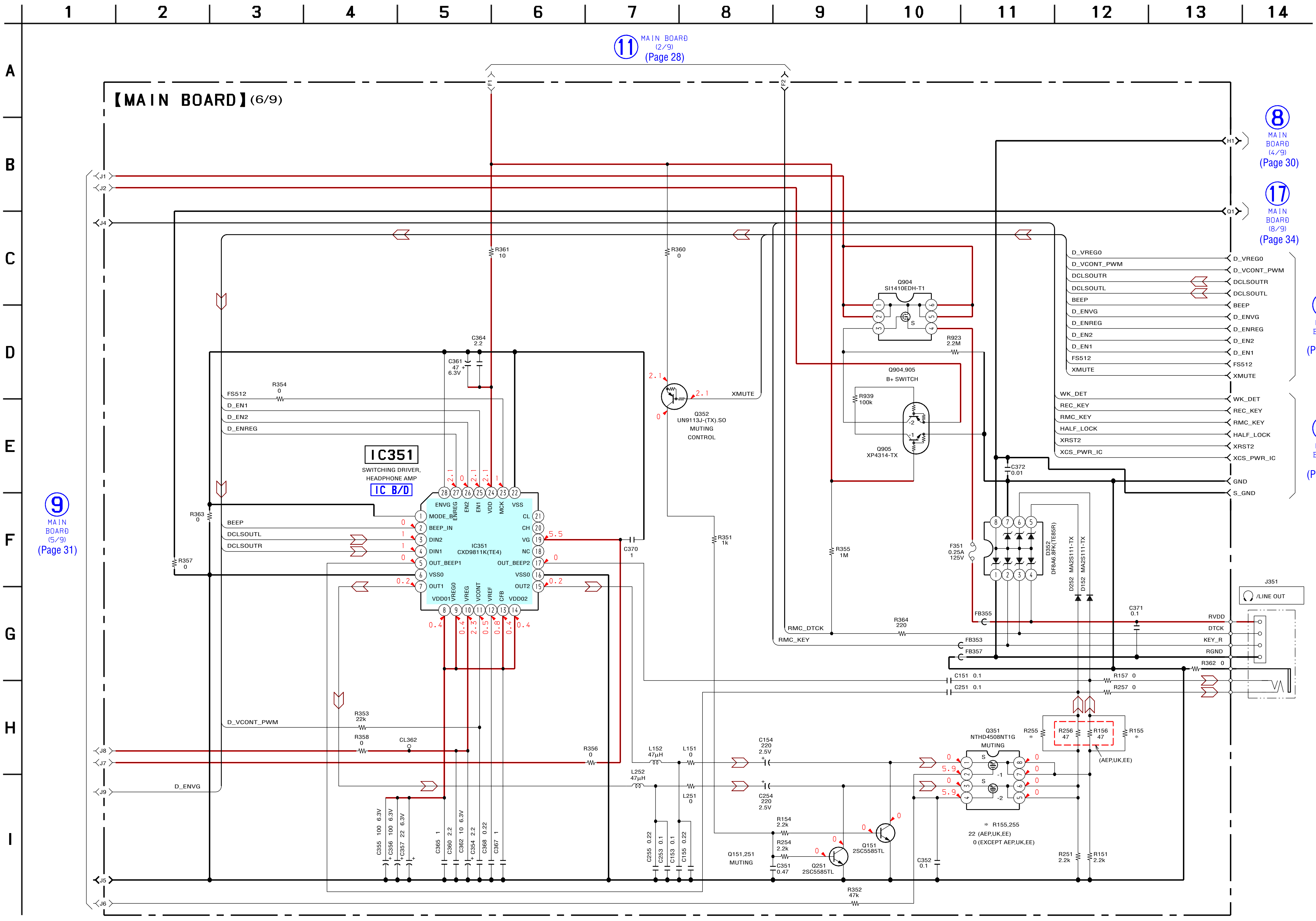
6-7. SCHEMATIC DIAGRAM – MAIN Section (4/9) – • See page 38 for IC Block Diagrams.



6-8. SCHEMATIC DIAGRAM – MAIN Section (5/9) – • See page 38 for IC Block Diagrams.

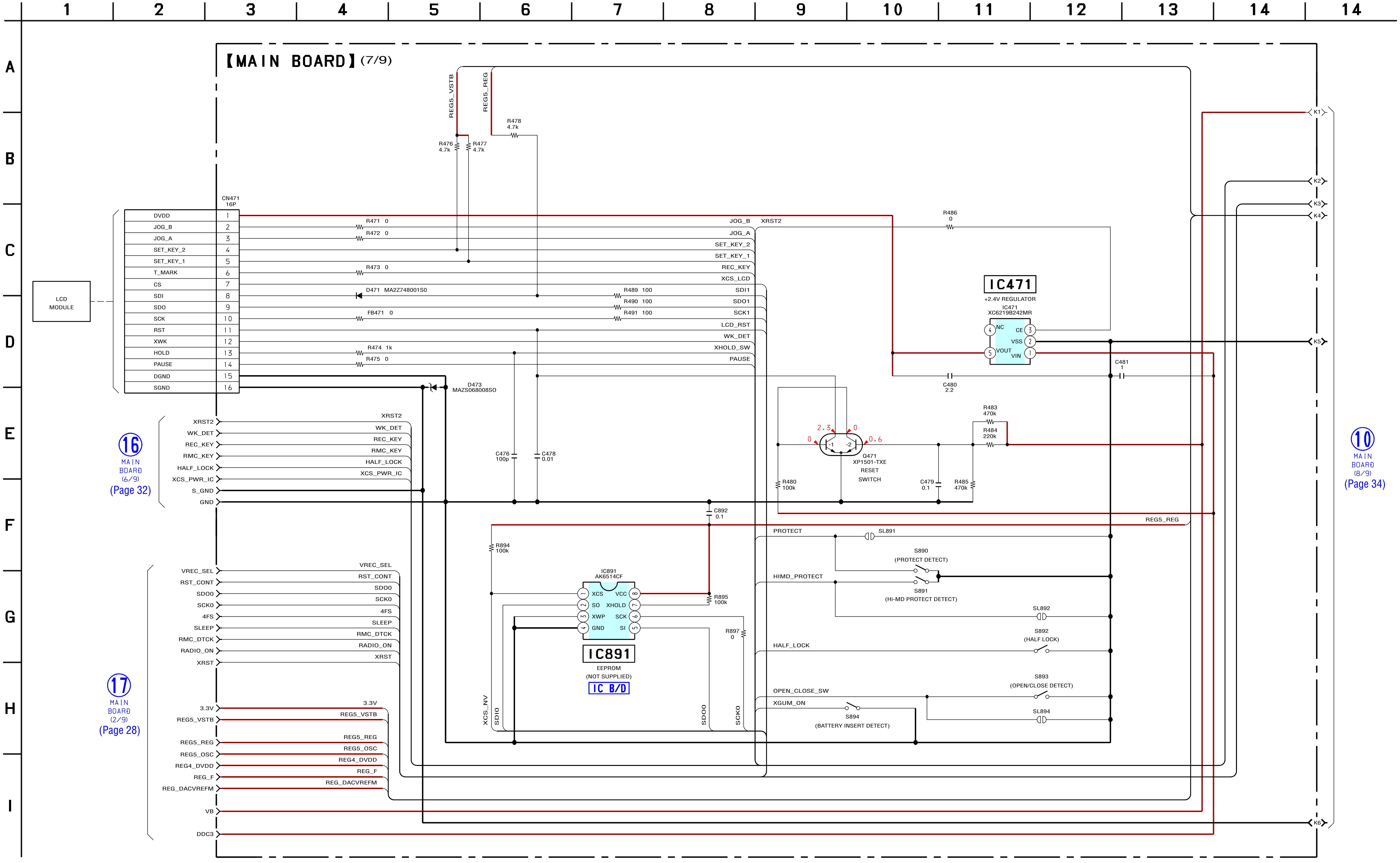


6-9. SCHEMATIC DIAGRAM – MAIN Section (6/9) – • See page 38 for IC Block Diagrams.



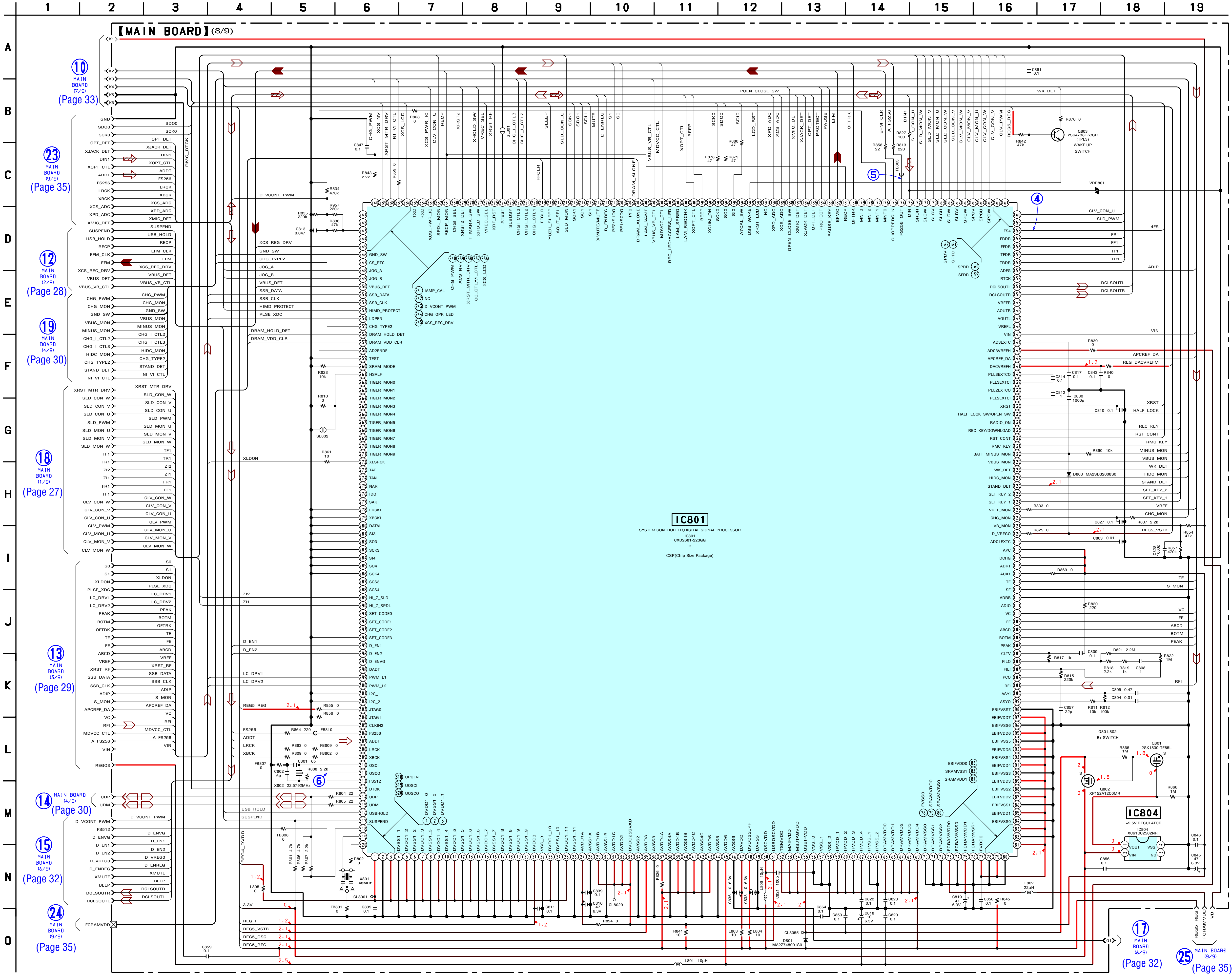
6-10. SCHEMATIC DIAGRAM – MAIN Section (7/9) –

• See page 38 for IC Block Diagrams.

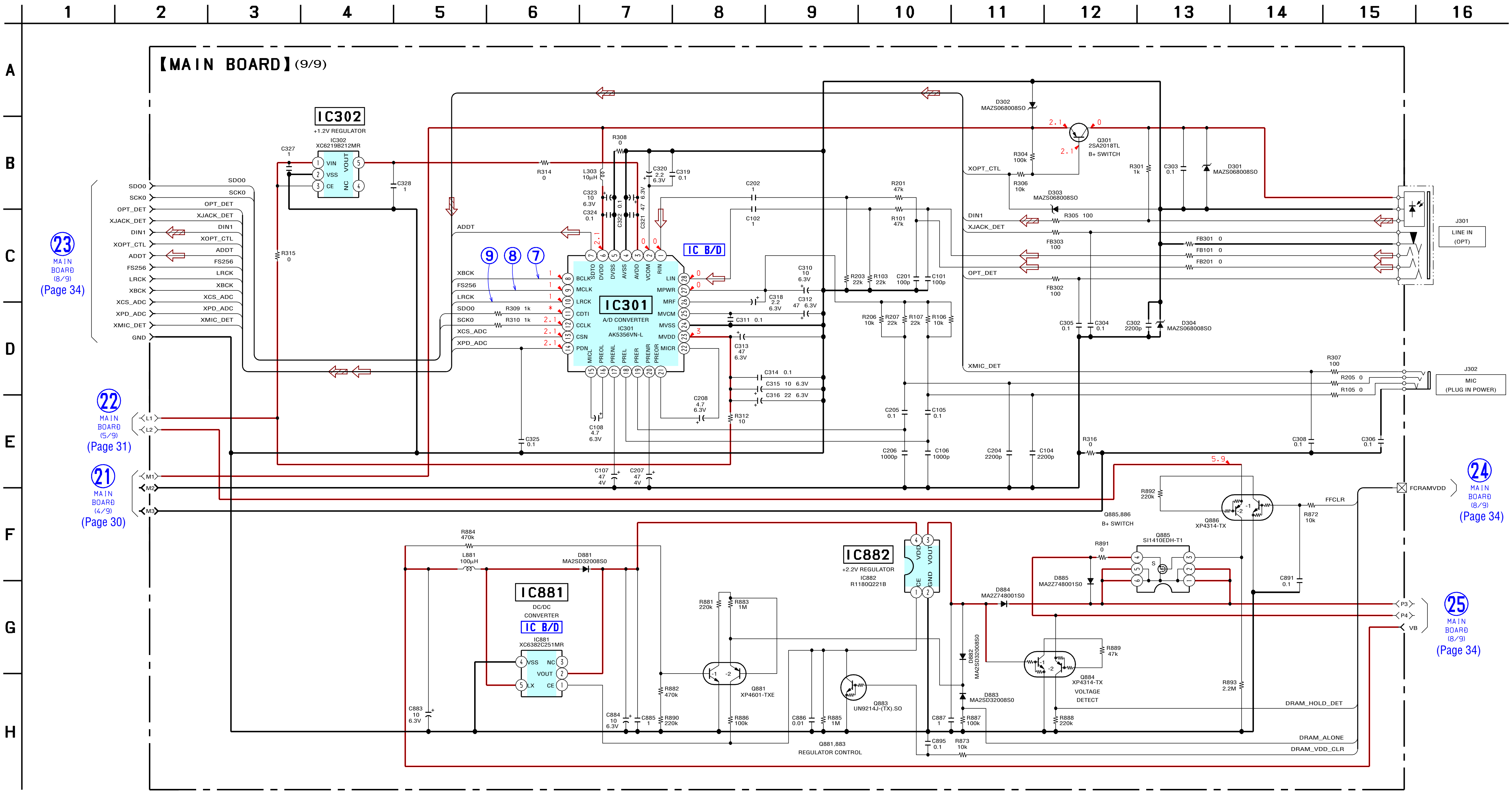


6-11. SCHEMATIC DIAGRAM – MAIN Section (8/9) –

• See page 26 for Waveforms. • See page 42 for IC Pin Function Description.



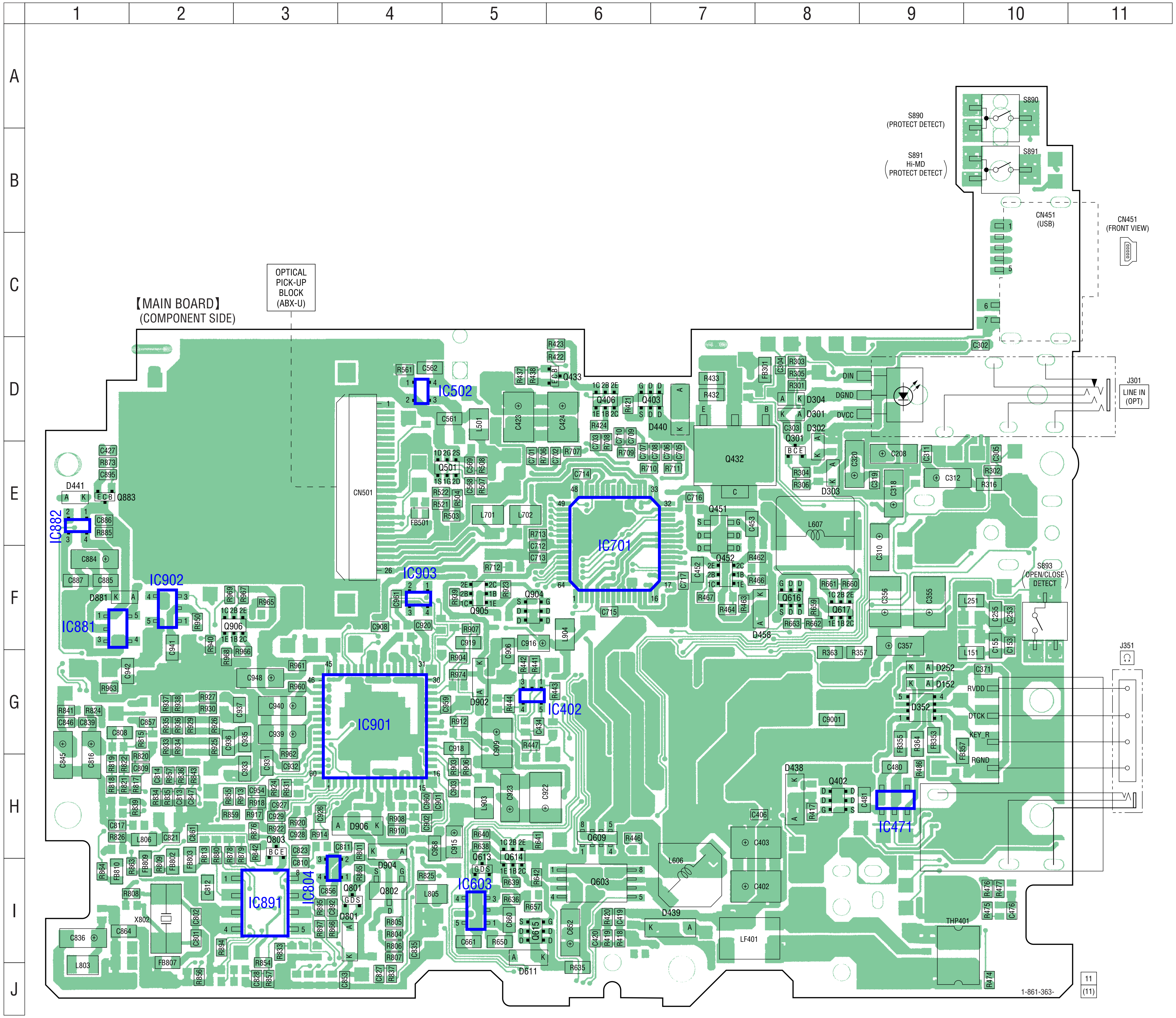
6-12. SCHEMATIC DIAGRAM – MAIN Section (9/9) – • See page 26 for Waveforms. • See page 38 for IC Block Diagrams.



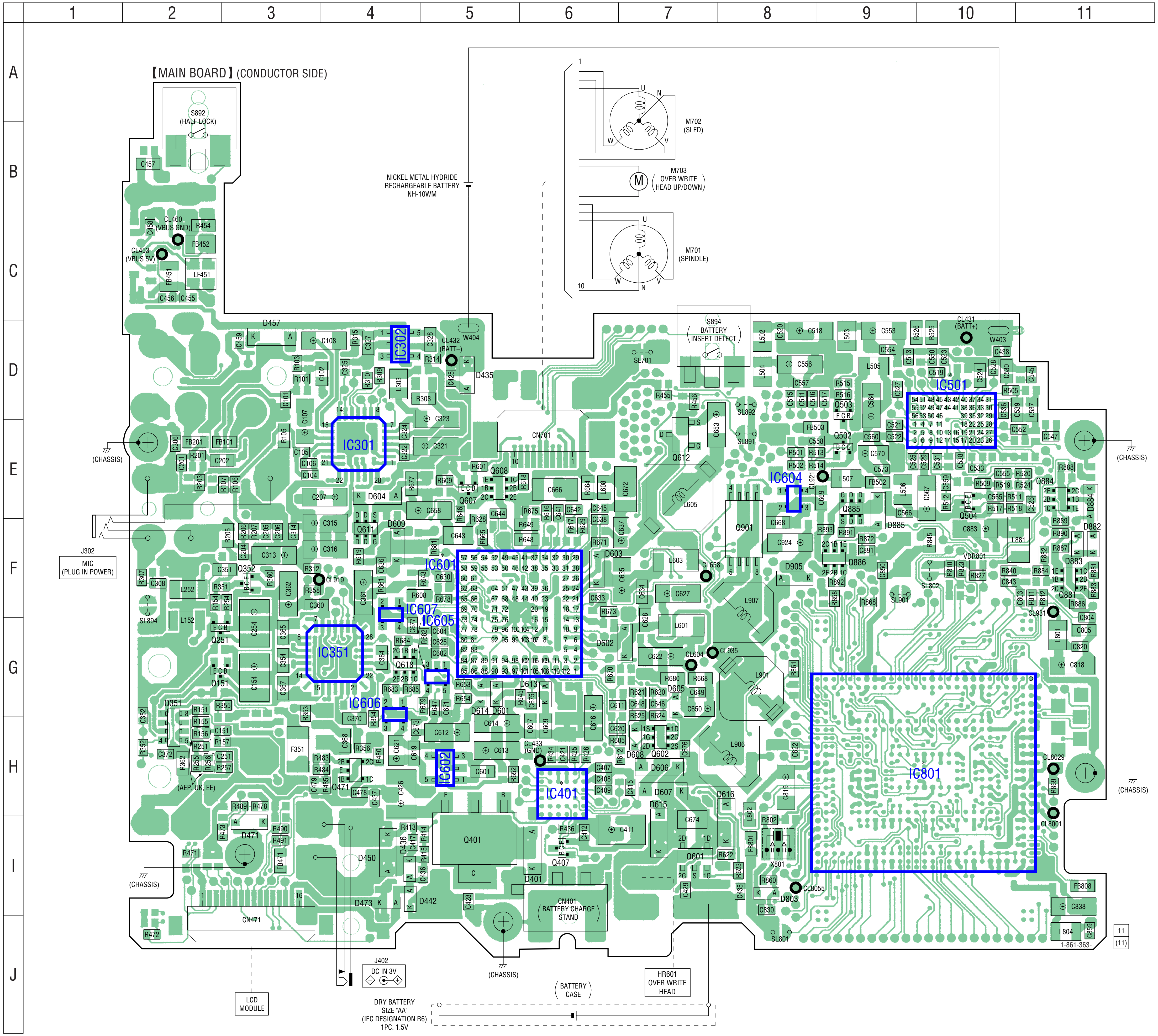
6-13. PRINTED WIRING BOARD – MAIN Section (1/2) – : Uses unleaded solder.

• **Semiconductor Location**

Ref. No.	Location
D152	G-9
D252	G-9
D301	D-8
D302	E-8
D303	E-8
D304	D-8
D352	G-9
D438	H-8
D439	I-7
D440	D-7
D441	E-1
D458	F-8
D611	I-5
D801	I-4
D881	F-1
D902	G-5
D904	H-4
D906	H-4
IC402	G-5
IC471	I-9
IC502	D-4
IC603	I-5
IC701	E-6
IC804	I-3
IC881	F-1
IC882	E-1
IC891	I-3
IC901	G-4
IC902	F-2
IC903	F-4
Q301	E-8
Q402	H-8
Q403	D-6
Q406	D-6
Q432	E-7
Q433	D-6
Q451	E-7
Q452	F-7
Q501	E-5
Q603	I-6
Q609	H-6
Q613	I-5
Q614	H-5
Q615	I-5
Q616	F-8
Q617	F-8
Q801	I-4
Q802	I-4
Q803	H-3
Q883	E-1
Q904	F-5
Q905	F-5
Q906	F-3



6-14. PRINTED WIRING BOARD – MAIN Section (2/2) – : Uses unleaded solder.

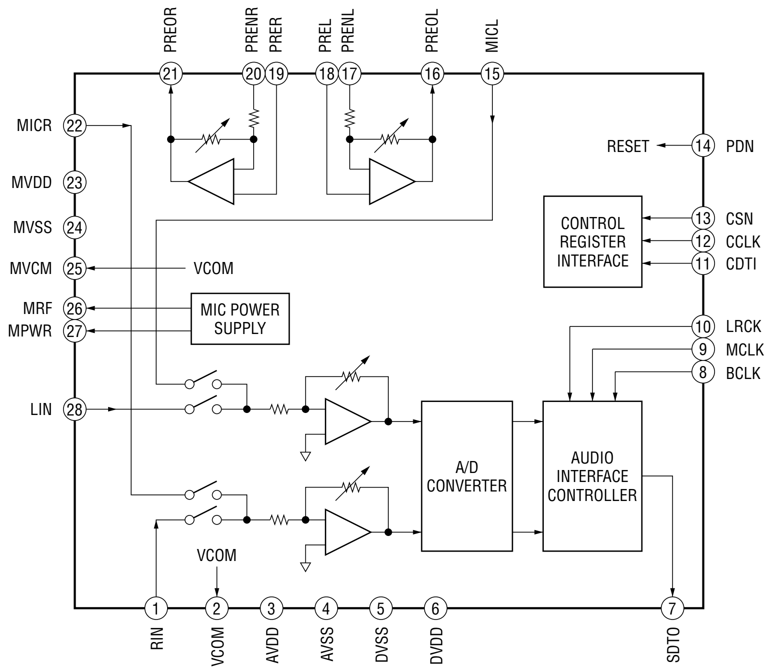


• **Semiconductor Location**

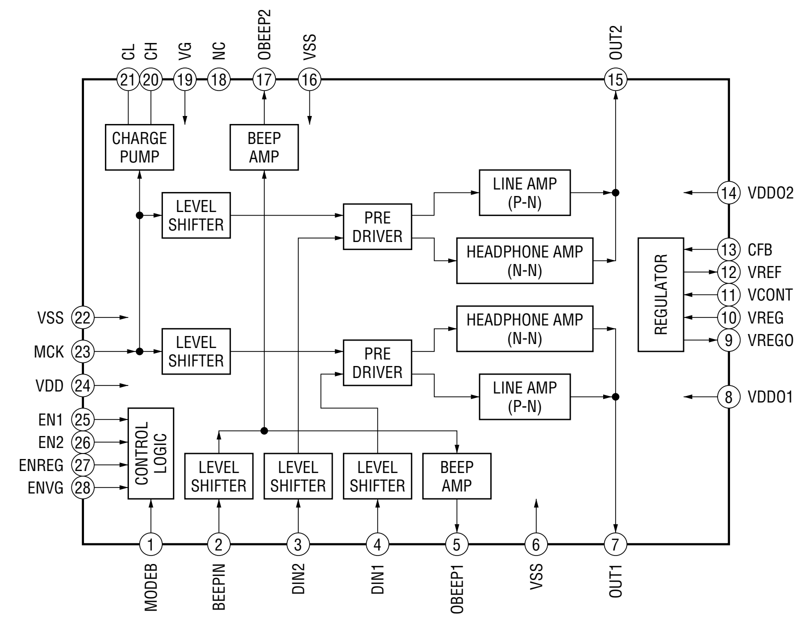
Ref. No.	Location
D401	I-6
D435	D-5
D436	I-4
D442	I-4
D450	I-4
D457	D-3
D471	I-3
D473	I-4
D601	G-5
D602	G-7
D603	F-6
D604	E-4
D605	G-7
D606	H-7
D607	H-7
D608	H-7
D609	F-4
D613	G-6
D614	G-5
D615	I-7
D616	I-8
D803	I-8
D882	F-11
D883	F-11
D884	E-11
D885	E-9
D905	F-8
IC301	E-4
IC302	D-4
IC351	G-4
IC401	H-6
IC501	D-10
IC601	G-5
IC602	H-5
IC604	E-8
IC605	G-5
IC606	G-4
IC607	F-4
IC801	H-10
Q151	G-2
Q251	G-2
Q351	H-2
Q352	F-3
Q401	I-5
Q407	I-6
Q471	H-4
Q502	E-9
Q503	D-9
Q504	E-10
Q601	I-7
Q602	H-7
Q607	E-5
Q608	E-5
Q611	F-4
Q612	E-7
Q618	G-4
Q881	F-11
Q884	E-11
Q885	E-9
Q886	F-9
Q901	F-8

• **IC Block Diagrams**

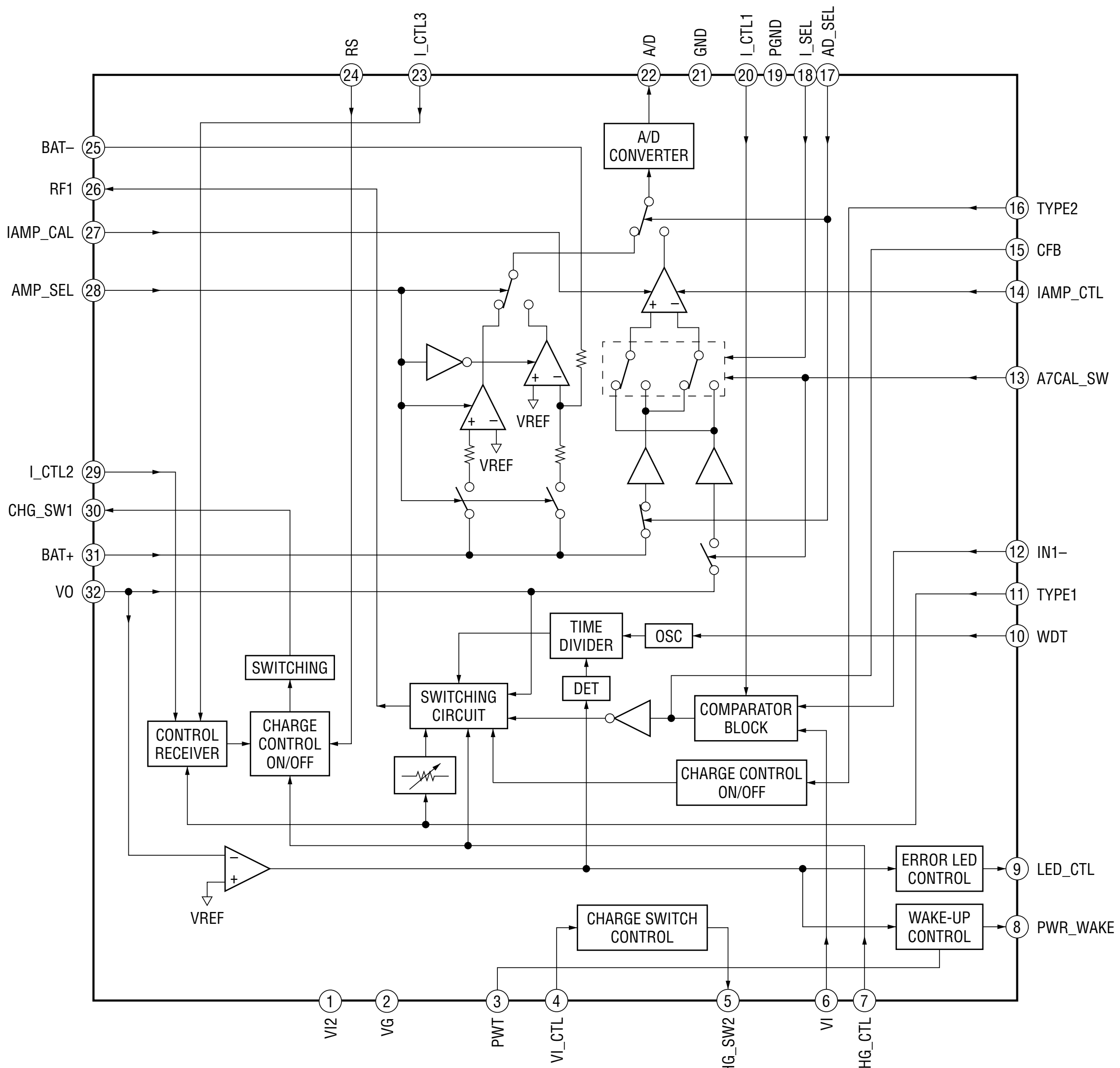
IC301 AK5356VN-L



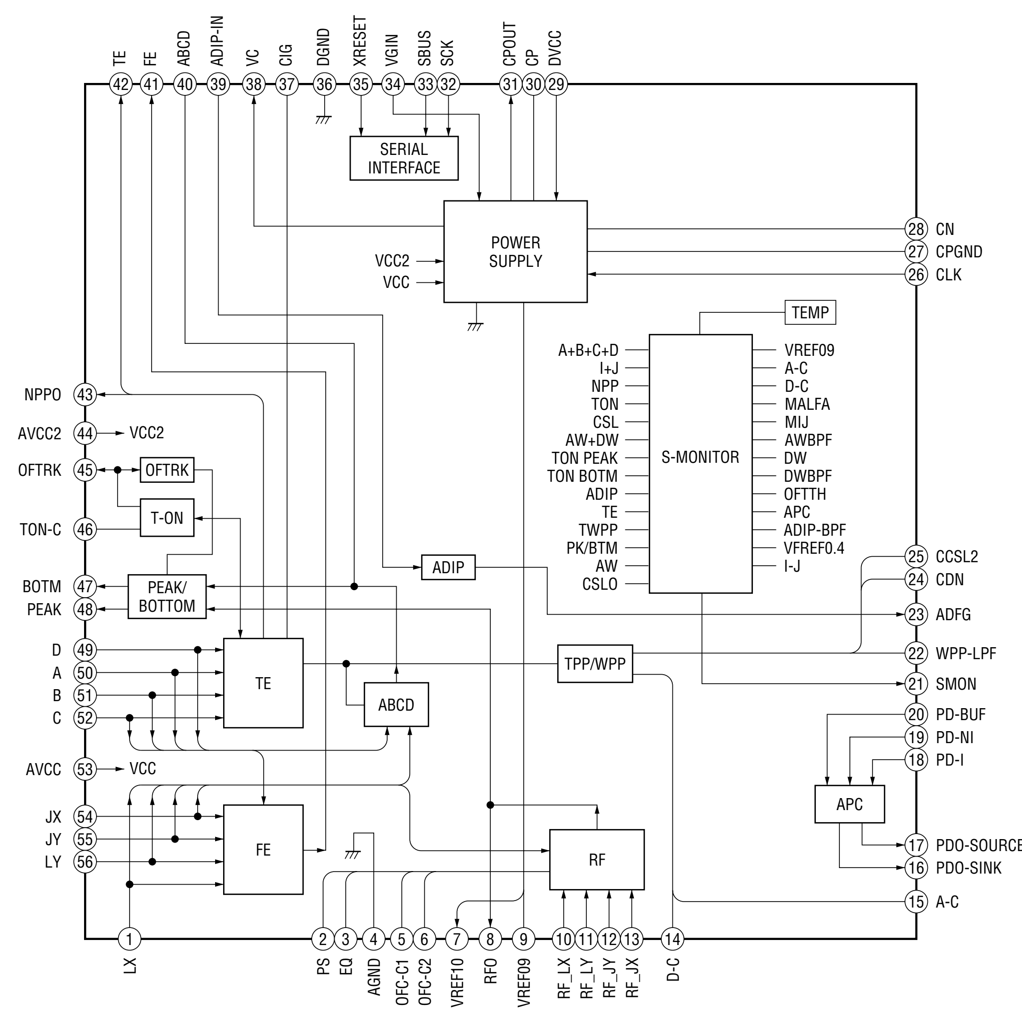
IC351 CXD9811K



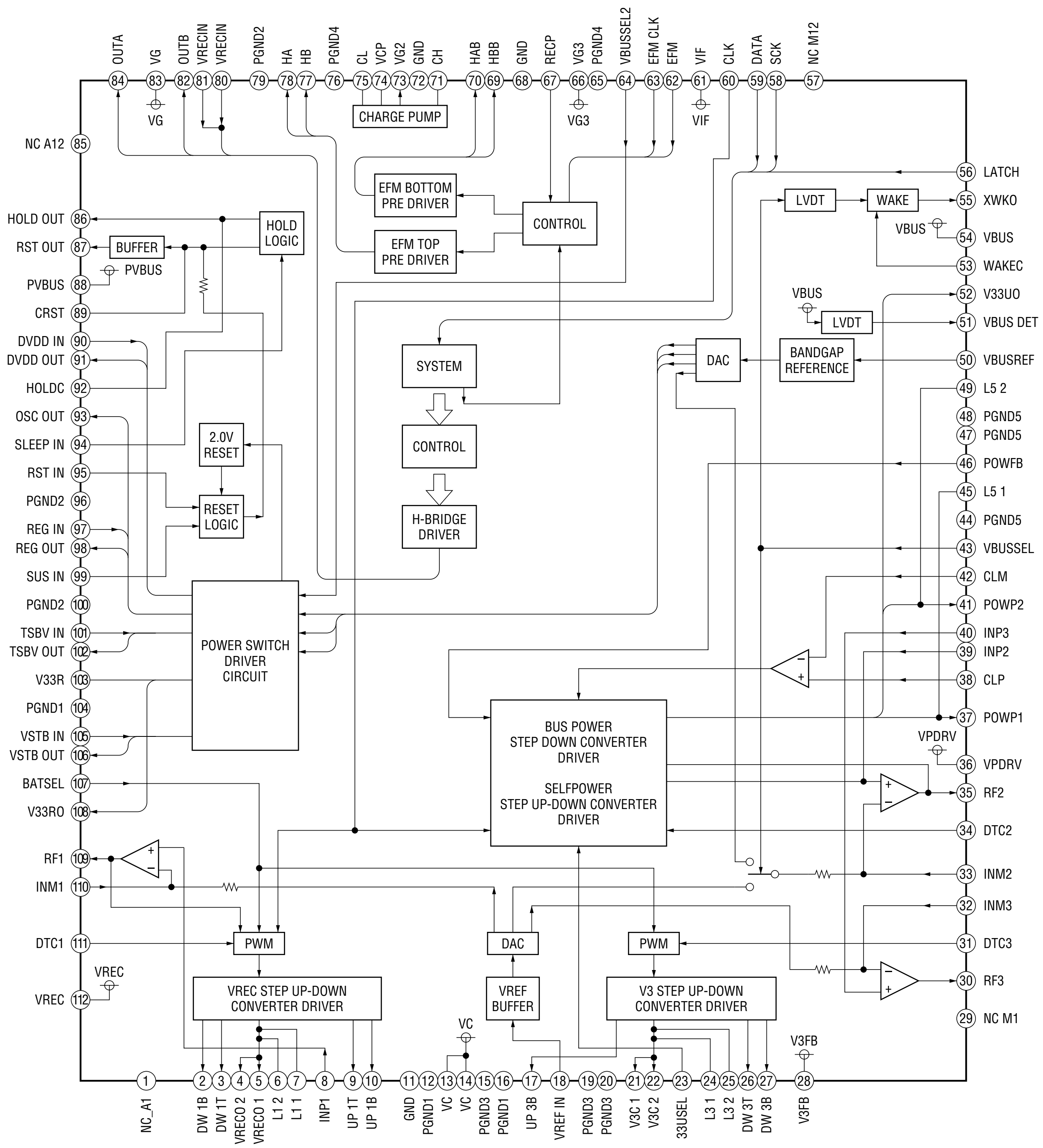
IC401 MM1655NCBE



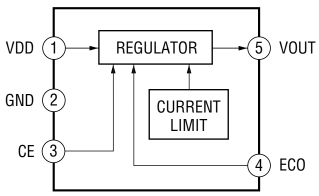
IC501 SN761059ZQLR



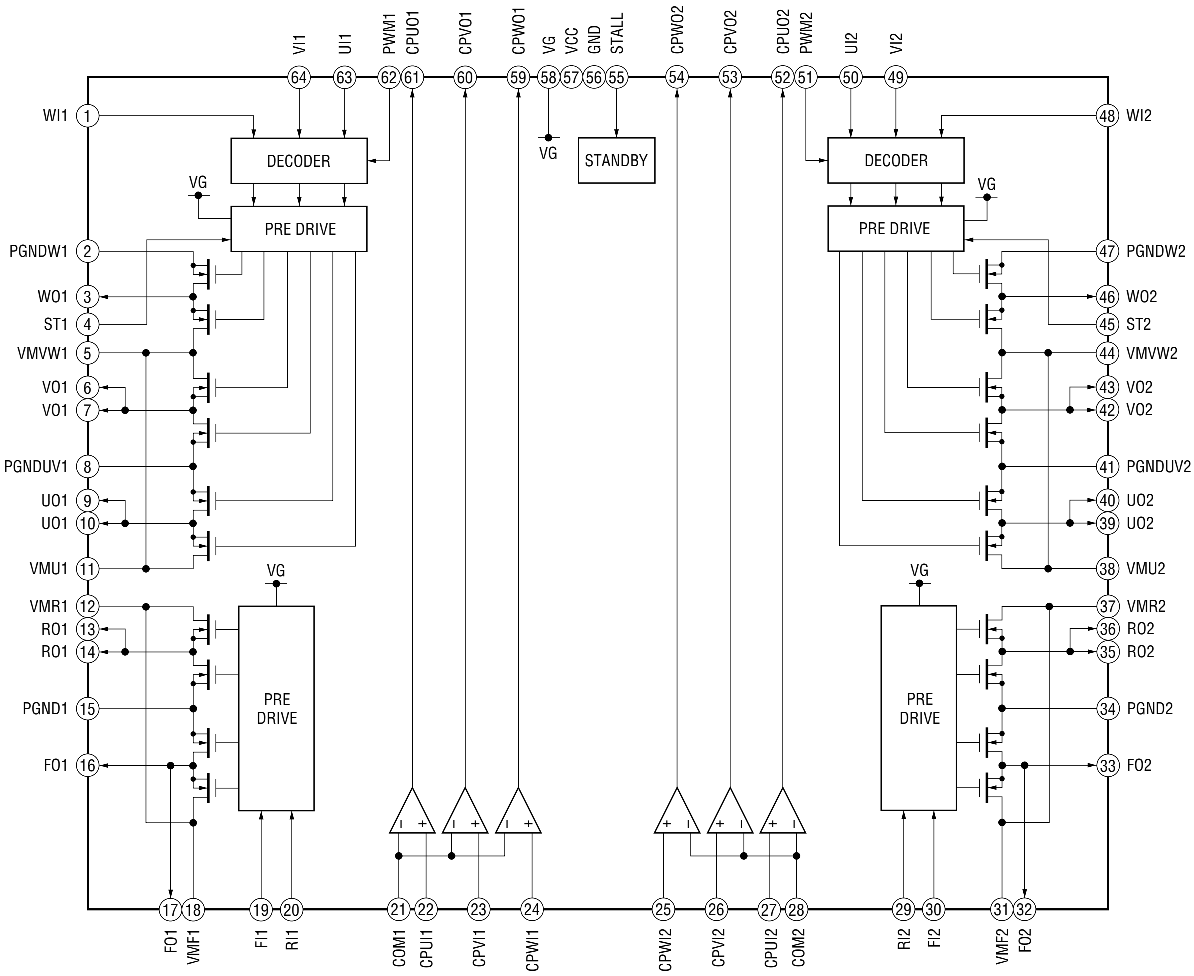
IC601 SC901585VAR2



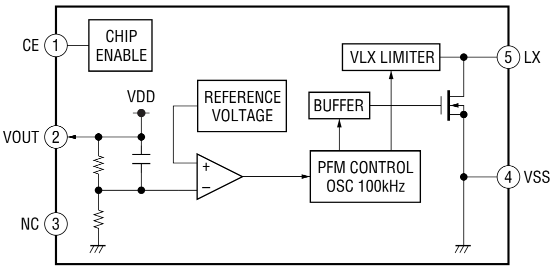
IC602 R1160N121B-TR-FA



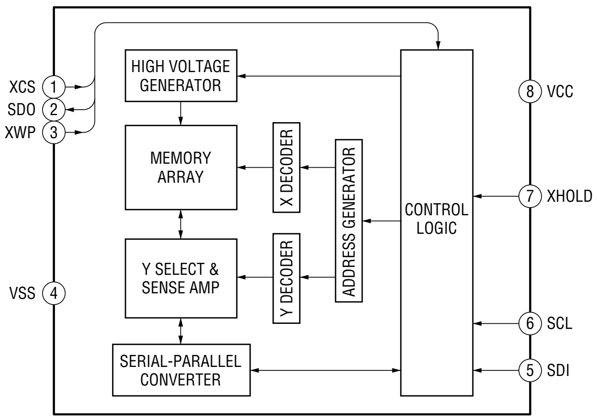
IC701 BD6607KN



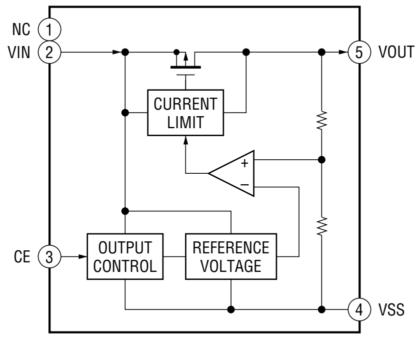
IC881 XC6382C251MR



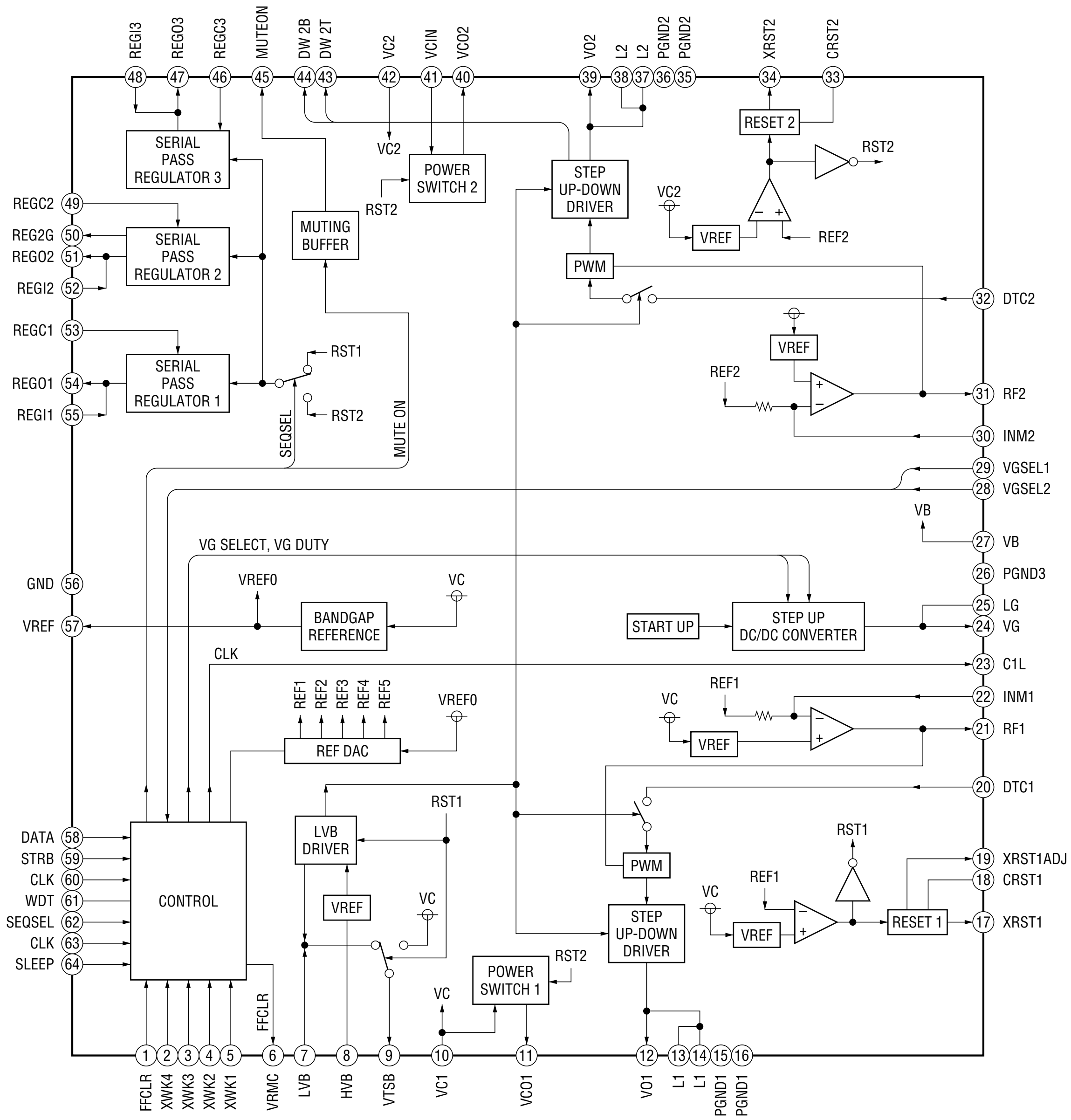
IC891 AK6514CF-E2



IC902 XC62HR5502MR



IC901 SC901584EPR2



- **IC Pin Function Description**

IC801 CXD2681-223GG (SYSTEM CONTROLLER, DIGITAL SIGNAL PROCESSOR)

Pin No.	Pin Name	I/O	Description
1	DVDD1_0	—	Power supply terminal
2	DVSS1_0	—	Ground terminal
3	DVDD1_1	—	Power supply terminal
4	DVSS1_1	—	Ground terminal
5	DVDD1_2	—	Power supply terminal
6	DVSS1_2	—	Ground terminal
7	DVDD1_3	—	Power supply terminal
8	DVSS1_3	—	Ground terminal
9	DVDD1_4	—	Power supply terminal
10	DVSS1_4	—	Ground terminal
11	DVDD1_5	—	Power supply terminal
12	DVSS1_5	—	Ground terminal
13	DVDD1_6	—	Power supply terminal
14	DVSS1_6	—	Ground terminal
15	DVDD1_7	—	Power supply terminal
16	DVSS1_7	—	Ground terminal
17	DVDD1_8	—	Power supply terminal
18	DVSS1_8	—	Ground terminal
19	DVDD1_9	—	Power supply terminal
20	DVSS1_9	—	Ground terminal
21	DVDD3	—	Power supply terminal
22	VSS_3	—	Ground terminal
23	DVDD1_10	—	Power supply terminal
24	DVSS1_10	—	Ground terminal
25	DVDD1_11	—	Power supply terminal
26	DVSS1_11	—	Ground terminal
27	AVDD1A	—	Power supply terminal (for PLL)
28	AVSS1A	—	Ground terminal (for PLL)
29	AVDD1B	—	Power supply terminal
30	AVSS1B	—	Ground terminal
31	AVDD1C	—	Power supply terminal
32	AVDD2	—	Power supply terminal (for A/D converter)
33	DVDD25SVADC	—	Power supply terminal (for A/D converter)
34	AVSS2	—	Ground terminal (for A/D converter)
35	AVDD3	—	Power supply terminal (for A/D converter)
36	AVSS3	—	Ground terminal (for A/D converter)
37	AVDD4A	—	Power supply terminal (for PLL)
38	AVSS4A	—	Ground terminal (for PLL)
39	AVDD4B	—	Power supply terminal (for PLL)
40	AVSS4B	—	Ground terminal (for PLL)
41	AVDD4C	—	Power supply terminal (for D/A converter)
42	AVSS4C	—	Ground terminal (for D/A converter)
43	AVDD5	—	Power supply terminal (for PLL)
44	AVSS5	—	Ground terminal (for PLL)
45	AVDD6	—	Power supply terminal (for A/D converter)
46	AVSS6	—	Ground terminal (for A/D converter)

Pin No.	Pin Name	I/O	Description
47	DAVDD	—	Power supply terminal (for D/A converter)
48	DVDD25LPF	—	Power supply terminal (for D/A converter)
49	DAVSS	—	Ground terminal (for D/A converter)
50	OSCVDD	—	Power supply terminal (for 22 MHz OSC)
51	USBOSCVDD	—	Power supply terminal (for the USB 48 MHz OSC)
52	TSMVDD	—	Power supply terminal (for the TSB master communication)
53	MAIFVDD	—	Power supply terminal (for MA interface)
54	MSJTAGVDD	—	Power supply terminal (for AUX)
55	USBIFVDD	—	Power supply terminal (for USB interface)
56 to 58	VSS_0 to VSS_2	—	Ground terminal
59 to 62	IFVDD_1 to IFVDD_4	—	Power supply terminal (for interface)
63	IFVSS_1	—	Ground terminal (for interface)
64	IFVSS_2	—	Ground terminal (for interface)
65 to 69	DRAMVDD0 to DRAMVDD4	—	Power supply terminal (for D-RAM/DSP interface)
70 to 72	DRAMVSS0 to DRAMVSS2	—	Ground terminal (for D-RAM/DSP interface)
73	FCRAMVDD0	—	Power supply terminal (for D-RAM)
74	FCRAMVSS0	—	Ground terminal (for D-RAM)
75	FCRAMVDD1	—	Power supply terminal (for D-RAM)
76	FCRAMVSS1	—	Ground terminal (for D-RAM)
77	FVDD0	—	Power supply terminal (for AUX)
78	FVSS0	—	Ground terminal (for AUX)
79	SRAMVDD0	—	Power supply terminal (for AUX)
80	SRAMVSS0	—	Ground terminal (for AUX)
81	SRAMVDD1	—	Power supply terminal (for AUX)
82	SRAMVSS1	—	Ground terminal (for AUX)
83	EBIFVDD0	—	Power supply terminal (for interface circuit)
84	EBIFVSS0	—	Ground terminal (for interface circuit)
85	EBIFVDD1	—	Power supply terminal (for interface circuit)
86	EBIFVSS1	—	Ground terminal (for interface circuit)
87	EBIFVDD2	—	Power supply terminal (for interface circuit)
88	EBIFVSS2	—	Ground terminal (for interface circuit)
89	EBIFVDD3	—	Power supply terminal (for interface circuit)
90	EBIFVSS3	—	Ground terminal (for interface circuit)
91	EBIFVDD4	—	Power supply terminal (for interface circuit)
92	EBIFVSS4	—	Ground terminal (for interface circuit)
93	EBIFVDD5	—	Power supply terminal (for interface circuit)
94	EBIFVSS5	—	Ground terminal (for interface circuit)
95	EBIFVDD6	—	Power supply terminal (for interface circuit)
96	EBIFVSS6	—	Ground terminal (for interface circuit)
97	EBIFVDD7	—	Power supply terminal (for interface circuit)
98	EBIFVSS7	—	Ground terminal (for interface circuit)
99	ASYO	O	Playback EFM duplex signal output
100	ASYI	I	Playback EFM comparator slice level input
101	RFI	I	Playback EFM RF signal input from the RF amplifier

Pin No.	Pin Name	I/O	Description
102	PCO	O	Phase comparison output terminal for the playback EFM system master PLL
103	FILI	I	Filter input terminal for the playback EFM system master PLL
104	FILO	O	Filter output terminal for the playback EFM system master PLL
105	CLTV	I	Internal VCO control voltage input terminal for the playback EFM system master PLL
106	PEAK	I	Peak hold signal input of the light amount signal (RF/ABCD) the RF amplifier
107	BOTM	I	Bottom hold signal input of the light amount signal (RF/ABCD) the RF amplifier
108	ABCD	I	Light amount signal (ABCD) input from the RF amplifier
109	FE	I	Focus error signal input from the RF amplifier
110	VC	I	Middle point voltage input from the RF amplifier
111	ADIO	I	Monitor output terminal of A/D converter input signal Not used
112	ADRB	I	A/D converter the lower limit voltage input terminal
113	SE	I	Sled error signal input from the RF amplifier
114	TE	I	Tracking error signal input from the RF amplifier
115	AUX1	I	Auxiliary A/D input terminal
116	ADRT	I	The upper limit voltage of A/D converter input terminal Not used
117	DCHG	—	Connecting terminal with the analog power supply of low impedance
118	APC	I	Error signal input for the laser automatic power control
119	ADC1EXTC	—	Connection terminal for an external capacitor
120	D_VREGO	I	Voltage sensibility of regulator for class-D amplifier Not used
121	VB_MON	I	Unregulated power supply voltage monitoring terminal
122	CHG_MON	I	Charge or discharge current monitoring terminal
123	VREF_MON	O	Reference voltage output terminal
124	SET_KEY_1	I	Front panel key input terminal
125	SET_KEY_2	I	Front panel key input terminal
126	STAND_DET	I	DC input voltage for battery charge monitoring terminal
127	HIDC_MON	I	High DC voltage monitoring terminal
128	WK_DET	I	Panel key input for wake-up
129	VBUS_MON	I	USB power supply voltage monitoring terminal
130	BATT_MINUS _MON	I	Voltage monitoring terminal for the minus terminal of rechargeable battery
131	RMC_KEY	I	Remote commander key input terminal
132	RST_CONT	O	System reset signal output to the power control IC
133	REC_KEY /DOWNLOAD	I	DOWNLOAD key input terminal
134	RADIO_ON	I	Radio on detection input from the remote commander jack Not used
135	HALF_LOCK_ SW /OPEN_SW	I	Front panel open switch detection terminal
136	XRST	I	System reset signal input from the power control IC
137	PLL2EXTCI	I	Connection terminal for an external capacitor
138	PLL2EXTCO	O	Connection terminal for an external capacitor
139	PLL3EXTCI	I	Connection terminal for an external capacitor
140	PLL3EXTCO	O	Connection terminal for an external capacitor
141	DACVREFH	I	Reference voltage input terminal
142	APCREF_DA	O	Reference voltage output terminal
143	ADC3VREFH	I	Reference voltage input terminal
144	ADC3EXTC	—	Connection terminal for an external capacitor
145	VIN	I	RF signal input from the RF amplifier

Pin No.	Pin Name	I/O	Description
146	VREFL	I	Reference voltage terminal connected to the capacitor (for the built-in D/A converter L-CH) Not used
147	AOUTL	O	Built-in D/A converter L-CH signal output Not used
148	AOUTR	O	Built-in D/A converter R-CH signal output Not used
149	VREFR	I	Reference voltage terminal connected to the capacitor (for the built-in D/A converter R-CH) Not used
150	DCLSOUTR	O	PWM modulator signal output to the headphone amplifier (R-CH)
151	DCLSOUTL	O	PWM modulator signal output to the headphone amplifier (L-CH)
152	RTCK	—	Not used
153	ADFG	I	ADIP duplex FM signal (22.05±1kHz) input from the RF amplifier
154	TRDR	O	Tracking servo drive PWM signal output (–) to the coil driver
155	TFDR	O	Tracking servo drive PWM signal output (+) to the coil driver
156	FFDR	O	Focus servo drive PWM signal output (+) to the coil driver
157	FRDR	O	Focus servo drive PWM signal output (–) to the coil driver
158	FS4	O	176.4 kHz clock signal output
159	SFDR	O	Sled servo drive PWM signal output to the motor driver
160	SPRD	O	Spindle motor drive control signal output (U) to the motor driver
161	SPFD	O	Spindle servo drive PWM signal output to the motor driver
162	SPDV	O	Spindle motor drive control signal output (V) to the motor driver
163	SPDW	O	Spindle motor drive control signal output (W) to the motor driver
164	SPCU	I	Spindle motor drive comparison signal input (U) from the motor driver
165	SPCV	I	Spindle motor drive comparison signal input (V) from the motor driver
166	SPCW	I	Spindle motor drive comparison signal input (W) from the motor driver
167	SLDV	O	Sled motor drive control signal output (V) to the motor driver
168	SLDW	O	Sled motor drive control signal output (W) to the motor driver
169	SLCU	I	Sled motor drive comparison signal input (U) from the motor driver
170	SLCV	I	Sled motor drive comparison signal input (V) from the motor driver
171	SLCW	I	Sled motor drive comparison signal input (W) from the motor driver
172	SRDR	O	Sled motor drive control signal output (U) to the motor driver
173	DIN	I	Digital audio signal input terminal
174	FS256_OUT	O	11.2896 MHz clock output
175	CHOPPERCLK	O	Clock signal output for chopper
176 to 179	MNT0 to MNT3	O	Monitor output for DSP
180	OFTRK	I/O	Tracking signal input/output for MD3
181	RECP	O	Laser power changeover signal output
182	EFMO	O	EFM encode data output for the record
183	PAUSE_KEY	I	Pause key input terminal
184	PROTECT	I	Recording protector detection input for normal disc
185	OPT_DET	I	Optical digital input plug detection input terminal “H”: optical in
186	XJACK_DET	I	Line input plug detection input terminal “L”: plug in
187	XMIC_DET	I	Microphone input plug detection input terminal “L”: plug in
188	OPEN_CLOSE _SW	I	Open switch input terminal
189	XCS_ADC	O	Chip select signal output for A/D converter
190	XPD_ADC	O	Power control signal output for A/D converter
191	NC	—	Not used
192	XRST_LCD	O	Reset signal output for the LCD module

Pin No.	Pin Name	I/O	Description
193	USB_WAKE	I	System wake up signal input by USB connect
194	A7CAL_SW	I/O	Current sense amplifier input, and short switch control output terminal Not used
195	SI0	I	Serial data input from the EEPROM
196	SO0	O	Serial data output to the EEPROM
197	SCK0	O	Serial clock output to the EEPROM
198	XGUM_ON	I	Rechargeable battery insert detection signal terminal
199	BEEP	O	Beep sound control signal output to the headphone amplifier
200	XOPT_CTL	O	Power supply on/off control signal output for the optical input jack
201	LAM_REQCHK	I	LAM power check terminal Not used
202	LAM_SPREQ	O	LAM force stop request signal output Not used
203	REC_LED /ACCESS_LED	O	REC or Access LED drive signal output terminal Not used
204	MDVCC_CTL	O	Power supply control signal output for the OP modulation
205	VBUS_VB_CTL	O	USB power supply control signal output terminal
206	LAM_NAME	O	LAM name data request signal output terminal Not used
207	DRAM_ALONE	O	Self-refresh signal output for internal D-RAM
208	PF0	—	Not used
209	PF1/S0DO	O	Connect to the optical pick-up block
210	PF2/S1DO	O	Connect to the optical pick-up block
211	D_ENREG	O	Enable signal output to the headphone amplifier
212	XMUTE /MUTE	O	Muting on/off control signal output terminal
213	SI1	I	Serial data input from the LCD module
214	SO1	O	Serial data output to the LCD module
215	SCK1	I/O	Serial data transfer clock signal input/output terminal with the LCD module
216	SLD_MON	I	Sled servo monitoring terminal
217	AOUT_SEL	O	Headphone/line output switching terminal Not used
218	YUZU_SLEEP	O	Chip enable output to the power control IC
219	FFCLR	O	Power on/off control signal output for FCRAM (internal RAM)
220	CHGI_CTL1	O	Charge current limiter control signal output at the time of AC adaptor use “L”: limit off, “H”: limit on Not used
221	CHGI_CTL2	O	Charge current control signal output terminal “L”: low current charge
222	CHGI_CTL3	O	Charge current control signal output terminal “L”: low current charge
223	SLBUSY	I	Receive signal monitoring terminal for sled command
224	XTEST	I	Terminal for the test mode setting (normally open) “L”: test mode
225	XRF_RST	O	Reset signal output to the RF amplifier
226	VREC_SEL	O	VREC start-up timing control signal output terminal
227	XHOLD_SW	I	HOLD switch detection input terminal
228	T_MARK_SW	I	Track mark switch input terminal Not used
229	XRST2_DET	I	Reset signal input from the power control IC
230	CHGI_SEL	O	Charge/discharge control signal output for current sense amplifier Not used
231	RECP_MON	I	Laser power changeover signal monitoring terminal
232	SPDL_MON	I	Spindle servo monitoring terminal
233	XCS_PWR_IC	O	Chip select signal output to the power control IC
234	RXD	I	Not used
235	TXD	O	Not used
236	XCS_LCD	O	Chip select signal output to the LCD module

Pin No.	Pin Name	I/O	Description
237	CC_CTL /VI_CTL	O	Constant current circuit control signal output terminal
238	XRST_MTR _DRV	O	Reset signal output to the motor driver
239	XCS_NV	O	Chip select signal output to the EEPROM
240	CHG_PWM	O	Charge current or voltage control signal output terminal
241	IAMP_CAL	O	Offset signal output of current sense amplifier Not used
242	NC	—	Not used
243	D_VCONT _PWM	I	For voltage control signal output to the headphone amplifier
244	CHG_OPR_LED	O	Charge indication LED drive signal output terminal Not used
245	XCS_REC_DRV	O	Chip select signal output to the over write head driver
246	GND_SW	O	Ground line switching signal output terminal
247	CS_RTC	O	Chip select signal output for real time clock Not used
248	JOG_A	I	Jog dial pulse input terminal
249	JOG_B	I	Jog dial pulse input terminal
250	VBUS_DET	I	USB power supply voltage detection terminal
251	SSB_DATA	I/O	SSB data input/output with the RF amplifier
252	SSB_CLK	O	SSB clock output to the RF amplifier
253	HIMD_ PROTECT	I	Recording protector detection input for Hi-MD disc
254	LDPEN	O	Pulse/DC light-emit switching signal output terminal
255	CHG_TYPE2	O	Battery charge control signal output terminal "H": charging
256	DRAM_HOLD _DET	I	Detection terminal for internal D-RAM power supply information keeping
257	DRAM_VDD _CLR	O	Internal D-RAM power latch clear signal output for quick mode sleep
258	AD2ENDF	I	Monitoring terminal for flag of servo signal A/D measuring finish
259	TEST	—	Not used
260	SRAM_MODE	I	Not used
261	HSALF	I	Not used
262 to 271	TIGER_MON0 to TIGER_MON9	O	Trigger monitoring terminal output clock=18.5 MHz
272	XLSRCK	O	Pulse output for laser strobe recording
273	TAT	—	Not used
274	TAN	—	Not used
275	NAR	—	Not used
276	IDO	—	Not used
277	SAK	—	Not used
278	LRCKI	I	L/R sampling clock signal input terminal for PCM data interface Not used
279	XBCKI	I	Bit clock signal input terminal for the PCM data interface Not used
280	DATAI	I	Serial clock signal input terminal for the PCM data interface Not used
281	SI3	I	Serial data input for LAM microcomputer communication Not used
282	SO3	O	Serial data output for LAM microcomputer communication Not used
283	SCK3	O	Serial data transfer clock signal output for LAM microcomputer communication Not used
284	SI4	I	Data input from ATRAC3 plus encoder communication Not used
285	SO4	O	Data output for ATRAC3 plus encoder communication Not used
286	SCK4	O	Clock signal output for ATRAC3 plus encoder communication Not used

Pin No.	Pin Name	I/O	Description
287	SCS3	O	Chip select signal output for LAM microcomputer communication Not used
288	SCS4	O	Chip select signal output for ATRAC3 plus encoder communication Not used
289	HI_Z_SLD	O	Standby signal output terminal for the sled motor
290	HI_Z_SPDL	O	Standby signal output terminal for the spindle motor
291 to 294	SET_CODE0 to SET_CODE3	I	Setting terminal for the destination
295, 296	D_EN1, D_EN2	O	Headphone/LINE/beep switching signal output to the headphone amplifier
297	D_ENVG	O	Enable/disable switching control terminal for class-D amplifier booster circuit Not used
298	DADT	O	Audio data output terminal Not used
299	PWM_L1	O	LC drive PWM output terminal
300	PWM_L2	O	LC drive PWM output terminal
301	I2C 1	—	Open drain for IIC
302	I2C 2	—	Open drain for IIC
303, 304	TEST	—	Not used
305	CLKIN2	I	Clock signal input terminal (13.5 MHz or 27 MHz) Not used
306	FS256	O	Master clock signal (256Fs=11.2896 MHz) output to A/D converter
307	ADDT	I	Data input from A/D converter
308	LRCK	O	L/R sampling clock signal (44.1kHz) output to external A/D converter
309	XBCK	O	Bit clock (2.8224 MHz) output to the external A/D converter
310	OSCI	I	Main system clock input terminal (22.5792 MHz)
311	OSCO	O	Main system clock output terminal (22.5792 MHz)
312	FS512	O	Clock signal output to the headphone amplifier
313	DTCK	I/O	TSB master data clock input/output or SSB data input/output
314	UDP	I/O	USB data (+) input/output terminal
315	UDM	I/O	USB data (–) input/output terminal
316	USBHOLD	I	USB hold signal input terminal
317	SUSPEND	O	USB suspend signal output
318	UPUEN	O	USB pull-up resistor connection control output terminal
319	UOSCI	I	Resonator (48MHz) connection terminal for the USB oscillation circuit
320	UOSCO	O	Resonator (48MHz) connection terminal for the USB oscillation circuit
321 to 325	NC	—	Not used

SECTION 7
EXPLODED VIEWS

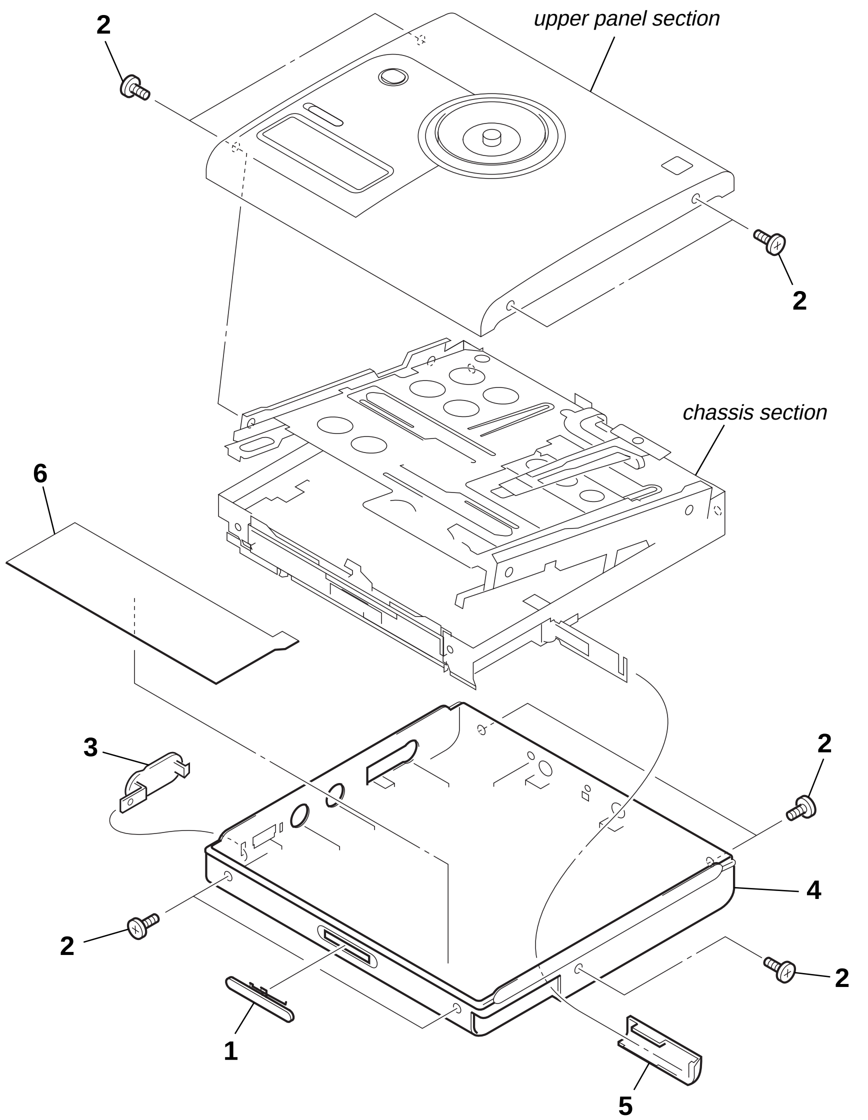
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
  EE : East European model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

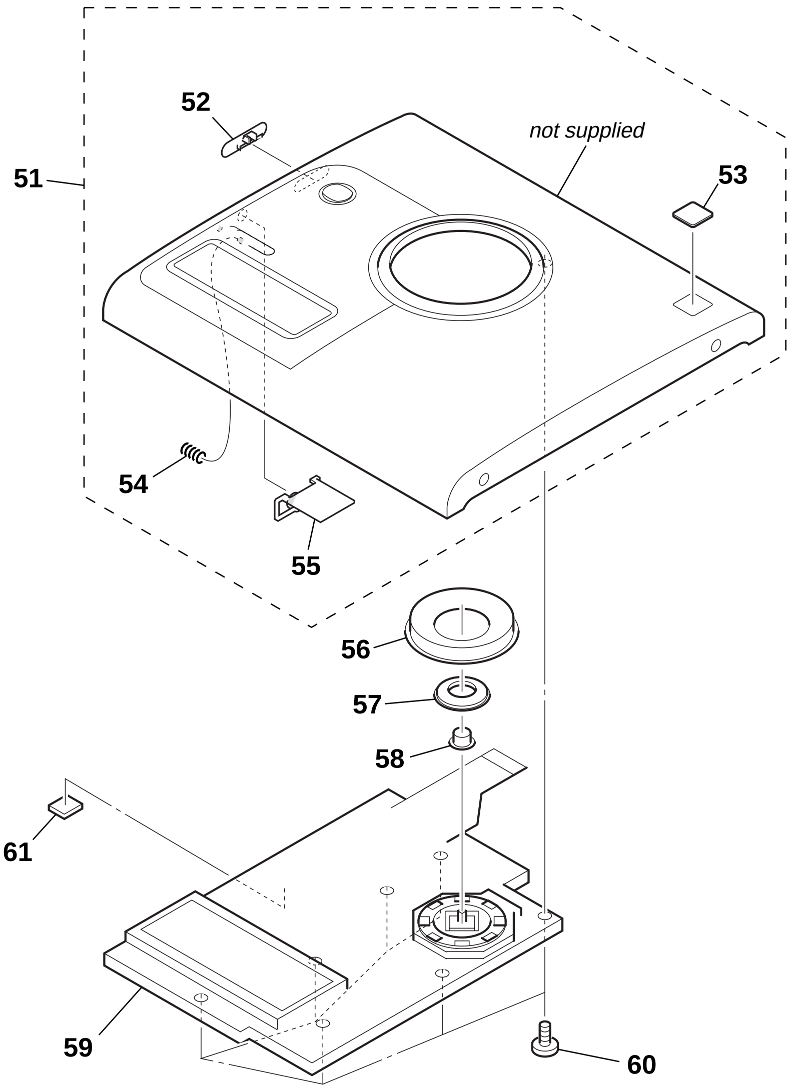
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

7-1. CASE SECTION



Ref. No.	Part No.	Description	Remark
1	3-266-206-11	KNOB (OPEN)	
2	3-234-449-19	SCREW (M1.4)	
3	3-266-207-01	CAP (USB)	
4	X-2023-388-1	CASE (LOWER) (S) SUB ASSY (SILVER)	
4	X-2023-389-1	CASE (LOWER) (B) SUB ASSY (BLACK)	
5	3-266-509-01	LID, BATTERY (for SILVER)	
5	3-266-509-11	LID, BATTERY (for BLACK)	
6	2-188-727-01	SHEET (BATT)	

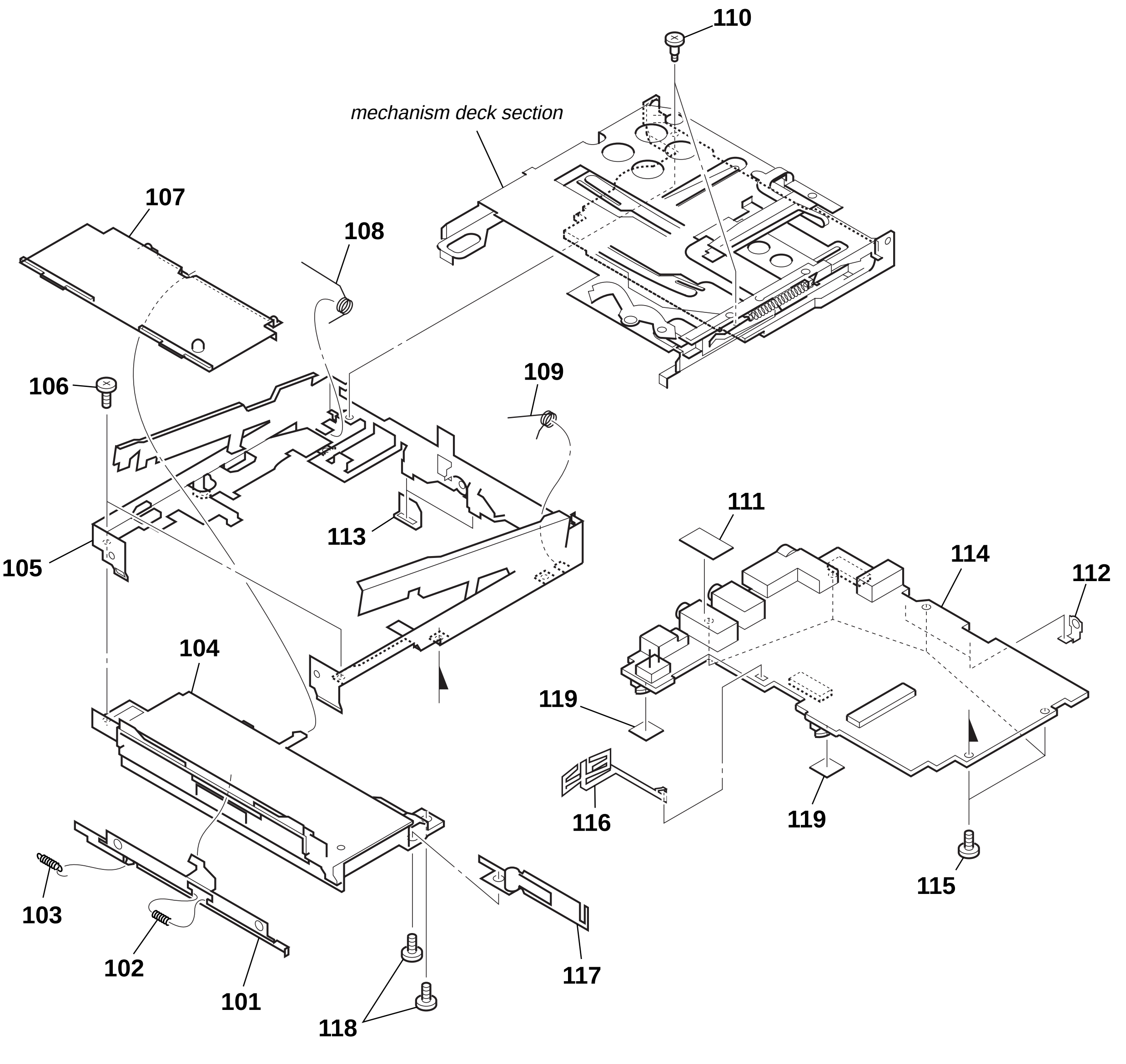
7-2. UPPER PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	X-2023-708-1	PANEL (S) SUB ASSY, UPPER (SILVER)	
51	X-2023-709-1	PANEL (B) SUB ASSY, UPPER (BLACK)	
52	3-237-092-01	KNOB (HOLD)	
53	3-264-154-01	BADGE (HI-MD)	
54	3-266-488-01	SPRING (REC), COMPRESSION	
55	3-266-485-01	BUTTON (T-MARK) (for SILVER)	
55	3-266-485-11	BUTTON (T-MARK) (for BLACK)	

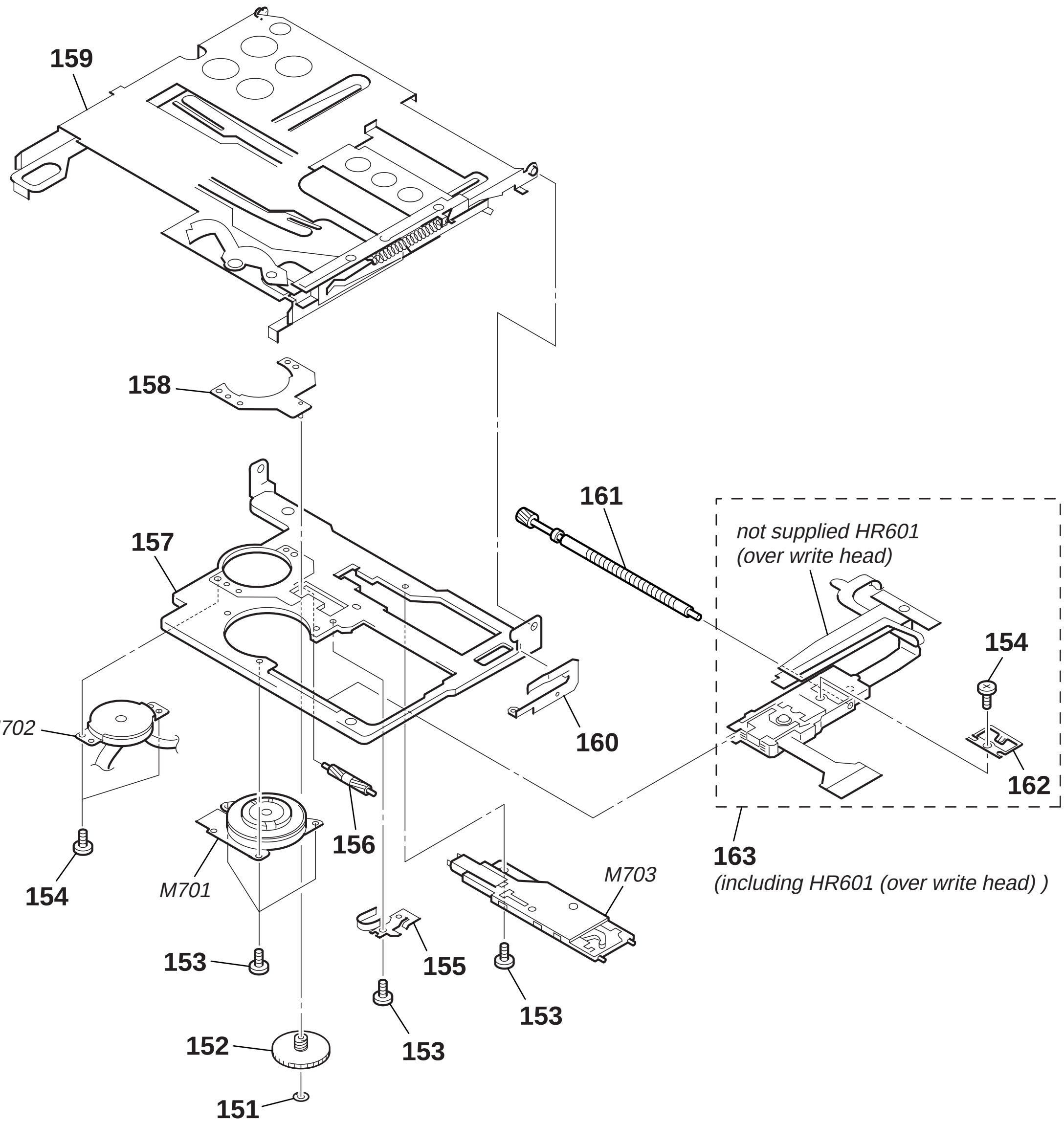
Ref. No.	Part No.	Description	Remark
56	3-266-492-01	KNOB (ROTARY)	
57	3-266-192-01	ESCUTCHEON (5 DIRECTION) (VOL +. ►►I. VOL -. I◄◄)	
58	3-266-191-01	KNOB (5 DIRECTION) (► ENT)	
59	1-805-513-11	LCD MODULE	
60	3-318-382-91	SCREW (1.7X2.5), TAPPING	
61	3-266-577-01	SPACER (HOLDER)	

7-3. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
101	3-266-499-01	OPEN SLIDER	
102	3-245-889-01	SPRING (LIMITTER), COMPRESSION	
103	3-266-534-01	SPRING (LOCK), TENSION	
104	3-266-506-01	CASE, BATTERY	
105	X-3385-106-1	CHASSIS ASSY, SET	
106	3-318-382-91	SCREW (1.7X2.5), TAPPING	
107	3-266-502-01	PIN, MD STANDARD	
108	3-266-500-01	SPRING (L), TORSION	
109	3-266-501-01	SPRING (R), TORSION	
110	3-246-996-01	SCREW (MD), STEP	
111	3-242-558-01	SPACER (LINE IN)	
112	3-245-901-01	TERMINAL (SUM 3)	
113	3-245-902-01	COVER, INSULATING	
114	X-2023-375-1	MAIN BOARD, COMPLETE (for SERVICE) (AEP, UK, EE)	
114	X-2023-376-1	MAIN BOARD, COMPLETE (for SERVICE) (US)	
114	X-2023-377-1	MAIN BOARD, COMPLETE (for SERVICE) (EXCEPT US, AEP, UK, EE)	
115	3-238-876-04	SCREW (M1.4), TOOTHED LOCK	
116	3-266-508-01	TERMINAL (-), BATTERY	
117	X-3382-584-1	TERMINAL (+) ASSY, BATTERY	
118	3-234-449-19	SCREW (M1.4)	
119	2-188-728-01	SHEET (SW)	

7-4. MECHANISM DECK SECTION (MT-MZNH900-181)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
151	3-338-645-31	WASHER (0.8-2.5)	
152	3-263-454-01	GEAR (BSA)	
153	3-248-370-01	SCREW, SELF TAP	
154	3-225-996-17	SCREW (M1.4) (EG), PRECISION PAN	
155	3-244-880-01	SPRING, THRUST RETAINER	
156	3-263-455-01	GEAR (SB)	
157	3-259-972-22	CHASSIS (REC)	
158	X-3384-651-2	BASE ASSY, MOTOR	
159	X-3384-650-1	HOLDER ASSY	
160	3-263-453-01	PLATE, RATCHET	
161	X-2023-272-1	LEAD SCREW SERVICE ASSY	
162	3-244-879-01	SPRING, RACK	
⚠163	X-2021-785-1	OP SERVICE ASSY (ABX-U) (including HR601(OVER WRITE HEAD))	
M701	8-835-782-12	MOTOR, DC SSM18D/C-NP (SPINDLE)	
M702	1-787-143-11	MOTOR, DC (SLED)	
M703	1-477-519-21	MOTOR UNIT, DC (OVER WRITE HEAD UP/DOWN)	

SECTION 8
ELECTRICAL PARTS LIST

MAIN

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Abbreviation
- Items marked “*” are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA... : μA... uPA... : μPA...
  uPB... : μPB... uPC... : μPC...
  uPD... : μPD...
- CAPACITORS
  uF: μF
- COILS
  uH: μH

AUS : Australian model
CH : Chinese model
CND: Canadian model
E18 : 100 V - 240 V AC area in E model
EE : East Europian model
HK : Hong Kong model
JE : Tourist model
KR : Korean model
TW : Taiwan model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	X-2023-375-1	MAIN BOARD, COMPLETE (for SERVICE) (AEP, UK, EE)			
	X-2023-376-1	MAIN BOARD, COMPLETE (for SERVICE) (US)			
	X-2023-377-1	MAIN BOARD, COMPLETE (for SERVICE) (EXCEPT US, AEP, UK, EE)			
		**********************			
		< CAPACITOR >			
C101	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C102	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C104	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C105	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C106	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C107	1-131-862-11	TANTALUM CHIP	47uF	20%	4V
C108	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C151	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C153	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C154	1-135-868-11	TANTALUM CHIP	220uF	20%	2.5V
C155	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C201	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C202	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C204	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C205	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C206	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C207	1-131-862-11	TANTALUM CHIP	47uF	20%	4V
C208	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C251	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C253	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C254	1-135-868-11	TANTALUM CHIP	220uF	20%	2.5V
C255	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C302	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C303	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C304	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C305	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C306	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C308	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C310	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C311	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C312	1-100-539-11	TANTALUM CHIP	47uF	20%	6.3V
C313	1-100-539-11	TANTALUM CHIP	47uF	20%	6.3V
C314	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C315	1-165-851-91	TANTALUM CHIP	10uF	20%	6.3V
C316	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C318	1-135-149-21	TANTALUM CHIP	2.2uF	10%	10V

Ref. No.	Part No.	Description			Remark
C319	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C320	1-135-149-21	TANTALUM CHIP	2.2uF	10%	10V
C321	1-100-539-11	TANTALUM CHIP	47uF	20%	6.3V
C322	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C323	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C324	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C325	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C327	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C328	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C351	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C352	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C354	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C355	1-128-964-11	TANTALUM CHIP	100uF	20%	6.3V
C356	1-128-964-11	TANTALUM CHIP	100uF	20%	6.3V
C357	1-137-739-91	TANTALUM CHIP	22uF	20%	6.3V
C360	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C361	1-100-539-11	TANTALUM CHIP	47uF	20%	6.3V
C362	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C364	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C365	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C367	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C368	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C370	1-100-352-11	CERAMIC CHIP	1uF	20%	16V
C371	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C372	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C402	1-100-609-11	TANTALUM CHIP	220uF		5V
C403	1-100-609-11	TANTALUM CHIP	220uF		5V
C406	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C407	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C408	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C409	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C411	1-119-751-11	TANTALUM CHIP	22uF	20%	16V
C412	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C415	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C417	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C419	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C420	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C421	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C423	1-100-609-11	TANTALUM CHIP	220uF		5V
C424	1-100-609-11	TANTALUM CHIP	220uF		5V
C425	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C426	1-119-751-11	TANTALUM CHIP	22uF	20%	16V
C427	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C428	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V

MAIN

Ref. No.	Part No.	Description			Remark
C429	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C434	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C435	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C436	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C437	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C438	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C452	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C453	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C455	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C456	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C457	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C458	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C459	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C476	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C478	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C479	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C480	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C481	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C511	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C513	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C515	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C516	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C517	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C518	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C519	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C520	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C521	1-164-850-11	CERAMIC CHIP	10PF	0.5PF	50V
C522	1-164-850-11	CERAMIC CHIP	10PF	0.5PF	50V
C523	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C524	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C525	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C526	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C527	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C528	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C529	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C530	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C531	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C533	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C536	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C537	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C538	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C539	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C545	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C547	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C550	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C552	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C553	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C554	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C555	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C556	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C557	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C558	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C559	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C560	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C561	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C562	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C564	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C565	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C566	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C567	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C568	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C569	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C570	1-112-014-11	TANTALUM CHIP	4.7uF	20%	6.3V
C573	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C601	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C602	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C604	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C607	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C609	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C611	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C612	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C613	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C614	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C616	1-165-897-11	TANTALUM CHIP	22uF	20%	10V
C619	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C620	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C621	1-117-919-11	TANTALUM CHIP	10uF	20%	6.3V
C622	1-100-539-11	TANTALUM CHIP	47uF	20%	6.3V
C625	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C627	1-100-539-11	TANTALUM CHIP	47uF	20%	6.3V
C628	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C630	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C633	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C634	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C635	1-100-539-11	TANTALUM CHIP	47uF	20%	6.3V
C636	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C637	1-100-442-11	TANTALUM CHIP	10uF	20%	6.3V
C638	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C641	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C642	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C643	1-100-743-91	CERAMIC CHIP	2.2uF	20%	16V
C644	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C645	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C646	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C648	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C649	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C650	1-100-442-11	TANTALUM CHIP	10uF	20%	6.3V
C652	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C653	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C658	1-100-539-11	TANTALUM CHIP	47uF	20%	6.3V
C660	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C661	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C666	1-127-820-11	CERAMIC CHIP	4.7uF	10%	16V
C668	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C669	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C671	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C672	1-127-820-11	CERAMIC CHIP	4.7uF	10%	16V
C673	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C674	1-112-010-11	CAP-CHIP	33PF	5%	100V
C675	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C676	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C677	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C701	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C702	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C703	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V

MAIN

Ref. No.	Part No.	Description			Remark
C705	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C706	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C707	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C708	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C709	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C710	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C712	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C713	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C714	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C715	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C716	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C717	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C801	1-164-846-11	CERAMIC CHIP	6PF	0.5PF	50V
C802	1-164-846-11	CERAMIC CHIP	6PF	0.5PF	50V
C803	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C804	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C805	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C808	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C809	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C810	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C811	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C812	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C813	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C814	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C816	1-100-539-11	TANTALUM CHIP	47uF	20%	6.3V
C817	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C818	1-165-851-91	TANTALUM CHIP	10uF	20%	6.3V
C819	1-100-539-11	TANTALUM CHIP	47uF	20%	6.3V
C820	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C821	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C822	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C823	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C827	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C828	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C830	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C835	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C836	1-165-851-91	TANTALUM CHIP	10uF	20%	6.3V
C838	1-165-851-91	TANTALUM CHIP	10uF	20%	6.3V
C839	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C843	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C845	1-100-539-11	TANTALUM CHIP	47uF	20%	6.3V
C846	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C847	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C850	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C853	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C856	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C857	1-164-858-11	CERAMIC CHIP	22PF	5%	50V
C859	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C861	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C864	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C883	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C884	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C885	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C886	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C887	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C891	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C892	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C895	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C901	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C902	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C903	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C906	1-100-352-11	CERAMIC CHIP	1uF	20%	16V
C908	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C909	1-119-751-11	TANTALUM CHIP	22uF	20%	16V
C915	1-100-442-11	TANTALUM CHIP	10uF	20%	6.3V
C916	1-100-442-11	TANTALUM CHIP	10uF	20%	6.3V
C918	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C919	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C920	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C922	1-128-964-11	TANTALUM CHIP	100uF	20%	6.3V
C923	1-100-539-11	TANTALUM CHIP	47uF	20%	6.3V
C924	1-100-539-11	TANTALUM CHIP	47uF	20%	6.3V
C926	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C927	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C928	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C929	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C931	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C932	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C933	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C935	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C936	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C937	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C939	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C940	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C941	1-100-352-11	CERAMIC CHIP	1uF	20%	16V
C942	1-100-352-11	CERAMIC CHIP	1uF	20%	16V
C948	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C954	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C958	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C959	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C960	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C961	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C9001	1-162-974-11	CERAMIC CHIP	0.01uF		50V
		< CONNECTOR >			
CN401	1-818-192-21	JACK (POWER CODE) (BATTERY CHARGE STAND)			
CN451	1-818-190-21	CONNECTOR, SQUARE TYPE (USB) 7P (USB)			
CN471	1-818-546-21	CONNECTOR, FFC/FPC (ZIF) 16P			
CN501	1-818-547-21	CONNECTOR, FFC/FPC (ZIF) 26P			
CN701	1-818-540-21	CONNECTOR, FFC/FPC (ZIF) 10P			
		< DIODE >			
D152	8-719-046-91	DIODE MA2S111			
D252	8-719-046-91	DIODE MA2S111			
D301	8-719-056-54	DIODE MAZS068008SO			
D302	8-719-056-54	DIODE MAZS068008SO			
D303	8-719-056-54	DIODE MAZS068008SO			
D304	8-719-056-54	DIODE MAZS068008SO			
D352	8-719-081-71	DIODE DF8A6.8FK (TE85R)			
D401	6-500-483-01	DIODE MA22D2800LS0			
D435	8-719-056-72	DIODE UDZ-TE-17-2.4B			
D436	8-719-056-54	DIODE MAZS068008SO			
D438	6-500-483-01	DIODE MA22D2800LS0			
D439	6-500-483-01	DIODE MA22D2800LS0			

MAIN

Ref. No.	Part No.	Description	Remark
D440	6-500-483-01	DIODE MA22D2800LS0	
D441	8-719-056-54	DIODE MAZS068008S0	
D442	8-719-056-54	DIODE MAZS068008S0	
D450	6-500-483-01	DIODE MA22D2800LS0	
D457	6-500-483-01	DIODE MA22D2800LS0	
D458	8-719-422-49	DIODE MA8056-L	
D471	8-719-072-27	DIODE MA2Z748001S0	
D473	8-719-056-54	DIODE MAZS068008S0	
D601	6-500-813-01	DIODE MA2SD32008S0	
D602	8-719-072-27	DIODE MA2Z748001S0	
D603	8-719-072-27	DIODE MA2Z748001S0	
D604	6-500-483-01	DIODE MA22D2800LS0	
D605	6-500-910-01	DIODE MA2SD3000LS0	
D606	6-500-909-01	DIODE MA22D1700LS0	
D607	6-500-909-01	DIODE MA22D1700LS0	
D608	6-500-910-01	DIODE MA2SD3000LS0	
D609	8-719-072-27	DIODE MA2Z748001S0	
D611	8-719-072-27	DIODE MA2Z748001S0	
D613	6-500-813-01	DIODE MA2SD32008S0	
D614	6-500-813-01	DIODE MA2SD32008S0	
D615	6-500-909-01	DIODE MA22D1700LS0	
D616	6-500-909-01	DIODE MA22D1700LS0	
D801	8-719-072-27	DIODE MA2Z748001S0	
D803	6-500-813-01	DIODE MA2SD32008S0	
D881	6-500-813-01	DIODE MA2SD32008S0	
D882	6-500-813-01	DIODE MA2SD32008S0	
D883	6-500-813-01	DIODE MA2SD32008S0	
D884	8-719-072-27	DIODE MA2Z748001S0	
D885	8-719-072-27	DIODE MA2Z748001S0	
D902	8-719-072-27	DIODE MA2Z748001S0	
D904	8-719-072-27	DIODE MA2Z748001S0	
D905	8-719-072-27	DIODE MA2Z748001S0	
D906	6-500-483-01	DIODE MA22D2800LS0	
		< FUSE >	
F351	1-576-439-21	FUSE (SMD) (0.25A/125V)	
		< FERRITE BEAD/SHORT >	
FB101	1-216-864-11	SHORT CHIP 0	
FB201	1-216-864-11	SHORT CHIP 0	
FB301	1-216-864-11	SHORT CHIP 0	
FB353	1-414-594-11	INDUCTOR, FERRITE BEAD	
FB355	1-414-594-11	INDUCTOR, FERRITE BEAD	
FB357	1-414-594-11	INDUCTOR, FERRITE BEAD	
FB451	1-469-869-21	INDUCTOR (EMI FERRITE) (2012)	
FB452	1-469-869-21	INDUCTOR (EMI FERRITE) (2012)	
FB471	1-216-864-11	SHORT CHIP 0	
FB501	1-400-620-21	INDUCTOR, FERRITE BEAD (1005)	
FB502	1-216-864-11	SHORT CHIP 0	
FB503	1-216-864-11	SHORT CHIP 0	
FB801	1-216-864-11	SHORT CHIP 0	
FB802	1-216-864-11	SHORT CHIP 0	
FB803	1-414-760-21	INDUCTOR, FERRITE BEAD	
FB807	1-216-864-11	SHORT CHIP 0	
FB808	1-216-864-11	SHORT CHIP 0	
FB809	1-216-864-11	SHORT CHIP 0	
FB810	1-414-760-21	INDUCTOR, FERRITE BEAD	
		< IC >	
IC301	6-702-894-01	IC AK5356VN-L	
IC302	6-706-528-01	IC XC6219B212MR	
IC351	6-704-998-01	IC CXD9811K (TE4)	
IC401	6-705-536-01	IC MM1655NCBE	
IC402	6-706-652-01	IC NJU7008F3 (TE1)	
IC471	6-705-715-01	IC XC6219B242MR	
IC501	6-705-012-01	IC SN761059ZQLR	
IC502	6-706-095-01	IC R1180Q301B-TR-FA	
IC601	6-705-000-01	IC SC901585VAR2	
IC602	6-703-317-01	IC R1160N121B-TR-FA	
* IC603	6-706-038-01	IC XC6209B322MR	
IC604	6-706-079-01	IC R1180Q121C-TR-FA	
IC605	6-706-214-01	IC TC7SL32FU (TE85R)	
IC606	6-702-590-01	IC XC61CN1702NR	
IC607	8-759-690-72	IC XC61CN0902NR	
IC701	6-704-999-01	IC BD6607KN	
IC801	8-753-229-55	IC CXD2681-223GG	
IC804	6-706-089-01	IC XC61CC2502NR	
IC881	6-759-639-21	IC XC6382C251MR	
IC882	6-706-094-01	IC R1180Q221B-TR-FA	
IC891	(Not supplied)	IC AK6514CF-E2	
IC901	6-704-997-01	IC SC901584EPR2	
IC902	6-706-090-01	IC XC62HR5502MR	
IC903	6-704-245-01	IC XC61CC1702NR	
		< JACK >	
J301	1-815-950-12	JACK (LINE IN (OPT))	
J302	1-794-084-12	JACK (MIC (PLUG IN POWER))	
J351	1-793-288-43	JACK (🎧/LINE OUT)	
J402	1-785-383-11	JACK, DC (POLARITY UNIFIED TYPE) (DC IN 3V)	
		< COIL/SHORT >	
L151	1-216-864-11	SHORT CHIP 0	
L152	1-400-582-21	INDUCTOR 47uH	
L251	1-216-864-11	SHORT CHIP 0	
L252	1-400-582-21	INDUCTOR 47uH	
L303	1-400-397-11	INDUCTOR 10uH	
L501	1-216-295-00	SHORT CHIP 0	
L502	1-400-397-11	INDUCTOR 10uH	
L503	1-400-397-11	INDUCTOR 10uH	
L504	1-400-397-11	INDUCTOR 10uH	
L505	1-400-397-11	INDUCTOR 10uH	
L506	1-400-397-11	INDUCTOR 10uH	
L507	1-400-397-11	INDUCTOR 10uH	
L601	1-414-398-11	INDUCTOR 10uH	
L603	1-414-398-11	INDUCTOR 10uH	
L605	1-456-697-21	INDUCTOR 22uH	
L606	1-400-626-11	INDUCTOR 10uH	
L607	1-419-881-11	INDUCTOR 47uH	
L608	1-400-402-21	INDUCTOR 4.7uH	
L701	1-216-295-00	SHORT CHIP 0	
L702	1-216-295-00	SHORT CHIP 0	
L801	1-400-397-11	INDUCTOR 10uH	
L802	1-400-343-21	INDUCTOR 22uH	
L803	1-216-001-00	RES-CHIP 10 5% 1/10W	
L804	1-216-001-00	RES-CHIP 10 5% 1/10W	

MAIN

Ref. No.	Part No.	Description		Remark
L805	1-216-295-00	SHORT CHIP	0	
L806	1-400-342-21	INDUCTOR	10uH	
L881	1-414-404-41	INDUCTOR	100uH	
L901	1-456-710-21	INDUCTOR	100uH	
L903	1-400-397-11	INDUCTOR	10uH	
L904	1-400-397-11	INDUCTOR	10uH	
L906	1-456-677-21	INDUCTOR	47uH	
L907	1-456-677-21	INDUCTOR	47uH	
		< LINE FILTER >		
LF401	1-411-957-11	FILTER, COMMON MODE		
LF451	1-456-111-11	COIL, COMMON MODE CHOKE		
		< TRANSISTOR >		
Q151	8-729-050-32	TRANSISTOR	2SC5585TL	
Q251	8-729-050-32	TRANSISTOR	2SC5585TL	
Q301	8-729-051-23	TRANSISTOR	2SA2018TL	
Q351	6-550-859-01	FET	NTHD4508NT1G	
Q352	8-729-037-61	TRANSISTOR	UN9113J-(TX).SO	
Q401	6-550-326-01	TRANSISTOR	FZT968TA	
Q402	6-550-353-01	FET	SI1410EDH-T1	
Q403	6-550-353-01	FET	SI1410EDH-T1	
Q406	8-729-427-74	TRANSISTOR	XP4601	
Q407	8-729-037-75	TRANSISTOR	UN9214J-(TX).SO	
Q432	8-729-044-57	TRANSISTOR	FZT688B-TP	
Q433	8-729-037-52	TRANSISTOR	2SD2216J-QR (TX).SO	
Q451	6-550-354-01	FET	RTQ035P02TR	
Q452	8-729-427-74	TRANSISTOR	XP4601	
Q471	8-729-429-44	TRANSISTOR	XP1501	
Q501	6-550-674-01	FET	MCH6604-K-TL-E	
Q502	8-729-051-23	TRANSISTOR	2SA2018TL	
Q503	8-729-037-52	TRANSISTOR	2SD2216J-QR (TX).SO	
Q504	8-729-037-89	TRANSISTOR	2SC4627J-C (TX).SO	
Q601	6-550-357-01	FET	CPH5614-TL-E	
Q602	6-550-740-01	FET	MCH6617-TL-E	
Q603	8-729-053-71	FET	TS8K1TB	
Q607	8-729-037-52	TRANSISTOR	2SD2216J-QR (TX).SO	
Q608	8-729-030-46	TRANSISTOR	XP4314-TX	
Q609	6-550-859-01	FET	NTHD4508NT1G	
Q611	6-550-353-01	FET	SI1410EDH-T1	
Q612	8-729-049-81	FET	SSM3K01F (TE85L)	
Q613	8-729-047-68	FET	SSM3K03FE (TPL3)	
Q614	8-729-427-74	TRANSISTOR	XP4601	
Q615	6-550-353-01	FET	SI1410EDH-T1	
Q616	6-550-353-01	FET	SI1410EDH-T1	
Q617	8-729-427-74	TRANSISTOR	XP4601	
Q618	8-729-427-74	TRANSISTOR	XP4601	
Q801	8-729-047-68	FET	SSM3K03FE (TPL3)	
Q802	8-729-051-50	FET	XP152A12C0MR	
Q803	8-729-037-52	TRANSISTOR	2SD2216J-QR (TX).SO	
Q881	8-729-427-74	TRANSISTOR	XP4601	
Q883	8-729-037-75	TRANSISTOR	UN9214J-(TX).SO	
Q884	8-729-030-46	TRANSISTOR	XP4314-TX	
Q885	6-550-353-01	FET	SI1410EDH-T1	
Q886	8-729-030-46	TRANSISTOR	XP4314-TX	
Q901	8-729-053-71	FET	TS8K1TB	
Q904	6-550-353-01	FET	SI1410EDH-T1	

Ref. No.	Part No.	Description				Remark
Q905	8-729-030-46	TRANSISTOR	XP4314-TX			
Q906	8-729-427-74	TRANSISTOR	XP4601			
		< RESISTOR >				
R101	1-208-927-11	METAL CHIP	47K	0.5%	1/16W	
R103	1-208-715-11	METAL CHIP	22K	0.5%	1/16W	
R105	1-216-864-11	SHORT CHIP	0			
R106	1-208-707-11	METAL CHIP	10K	0.5%	1/16W	
R107	1-208-715-11	METAL CHIP	22K	0.5%	1/16W	
R151	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	
R154	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	
R155	1-218-933-11	RES-CHIP	22	5%	1/16W	(AEP, UK, EE)
R155	1-218-990-11	SHORT CHIP	0 (EXCEPT AEP, UK, EE)			
R156	1-218-937-11	RES-CHIP	47	5%	1/16W	(AEP, UK, EE)
R157	1-218-990-11	SHORT CHIP	0			
R201	1-208-927-11	METAL CHIP	47K	0.5%	1/16W	
R203	1-208-715-11	METAL CHIP	22K	0.5%	1/16W	
R205	1-216-864-11	SHORT CHIP	0			
R206	1-208-707-11	METAL CHIP	10K	0.5%	1/16W	
R207	1-208-715-11	METAL CHIP	22K	0.5%	1/16W	
R251	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	
R254	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	
R255	1-218-933-11	RES-CHIP	22	5%	1/16W	(AEP, UK, EE)
R255	1-218-990-11	SHORT CHIP	0 (EXCEPT AEP, UK, EE)			
R256	1-218-937-11	RES-CHIP	47	5%	1/16W	(AEP, UK, EE)
R257	1-218-990-11	SHORT CHIP	0			
R301	1-218-953-11	RES-CHIP	1K	5%	1/16W	
R302	1-218-941-11	RES-CHIP	100	5%	1/16W	
R303	1-218-941-11	RES-CHIP	100	5%	1/16W	
R304	1-218-977-11	RES-CHIP	100K	5%	1/16W	
R305	1-218-941-11	RES-CHIP	100	5%	1/16W	
R306	1-218-965-11	RES-CHIP	10K	5%	1/16W	
R307	1-218-941-11	RES-CHIP	100	5%	1/16W	
R308	1-216-864-11	SHORT CHIP	0			
R309	1-218-953-11	RES-CHIP	1K	5%	1/16W	
R310	1-218-953-11	RES-CHIP	1K	5%	1/16W	
R312	1-208-635-11	METAL CHIP	10	0.5%	1/16W	
R314	1-218-990-11	SHORT CHIP	0			
R315	1-218-990-11	SHORT CHIP	0			
R316	1-216-864-11	SHORT CHIP	0			
R351	1-218-953-11	RES-CHIP	1K	5%	1/16W	
R352	1-218-973-11	RES-CHIP	47K	5%	1/16W	
R353	1-208-715-11	METAL CHIP	22K	0.5%	1/16W	
R354	1-218-990-11	SHORT CHIP	0			
R355	1-218-989-11	RES-CHIP	1M	5%	1/16W	
R356	1-218-990-11	SHORT CHIP	0			
R357	1-216-864-11	SHORT CHIP	0			
R358	1-218-990-11	SHORT CHIP	0			
R360	1-218-990-11	SHORT CHIP	0			
R361	1-208-635-11	METAL CHIP	10	0.5%	1/16W	
R362	1-216-864-11	SHORT CHIP	0			
R363	1-216-864-11	SHORT CHIP	0			
R364	1-216-813-11	METAL CHIP	220	5%	1/10W	
R413	1-218-977-11	RES-CHIP	100K	5%	1/16W	

MAIN

Ref. No.	Part No.	Description			Remark
R414	1-218-965-11	RES-CHIP	10K	5%	1/16W
R415	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R417	1-218-989-11	RES-CHIP	1M	5%	1/16W
R418	1-218-977-11	RES-CHIP	100K	5%	1/16W
R419	1-218-965-11	RES-CHIP	10K	5%	1/16W
R420	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R421	1-218-977-11	RES-CHIP	100K	5%	1/16W
R422	1-218-989-11	RES-CHIP	1M	5%	1/16W
R423	1-218-981-11	RES-CHIP	220K	5%	1/16W
R424	1-218-985-11	RES-CHIP	470K	5%	1/16W
R425	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R426	1-218-990-11	SHORT CHIP	0		
R432	1-245-456-21	METAL CHIP	1	1%	1/5W
R433	1-245-455-21	METAL CHIP	0.47	1%	1/5W
R434	1-218-989-11	RES-CHIP	1M	5%	1/16W
R436	1-218-981-11	RES-CHIP	220K	5%	1/16W
R437	1-218-981-11	RES-CHIP	220K	5%	1/16W
R438	1-218-977-11	RES-CHIP	100K	5%	1/16W
R441	1-218-977-11	RES-CHIP	100K	5%	1/16W
R442	1-218-977-11	RES-CHIP	100K	5%	1/16W
R443	1-218-977-11	RES-CHIP	100K	5%	1/16W
R444	1-218-977-11	RES-CHIP	100K	5%	1/16W
R446	1-218-990-11	SHORT CHIP	0		
R447	1-218-990-11	SHORT CHIP	0		
R454	1-216-864-11	SHORT CHIP	0		
R455	1-218-989-11	RES-CHIP	1M	5%	1/16W
R456	1-218-985-11	RES-CHIP	470K	5%	1/16W
R462	1-218-981-11	RES-CHIP	220K	5%	1/16W
R463	1-218-945-11	RES-CHIP	220	5%	1/16W
R464	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R466	1-220-804-11	RES-CHIP	2.2M	5%	1/16W
R467	1-218-965-11	RES-CHIP	10K	5%	1/16W
R471	1-218-990-11	SHORT CHIP	0		
R472	1-218-990-11	SHORT CHIP	0		
R473	1-218-990-11	SHORT CHIP	0		
R474	1-218-953-11	RES-CHIP	1K	5%	1/16W
R475	1-218-990-11	SHORT CHIP	0		
R476	1-208-699-11	METAL CHIP	4.7K	0.5%	1/16W
R477	1-208-699-11	METAL CHIP	4.7K	0.5%	1/16W
R478	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R480	1-218-977-11	RES-CHIP	100K	5%	1/16W
R483	1-218-985-11	RES-CHIP	470K	5%	1/16W
R484	1-218-981-11	RES-CHIP	220K	5%	1/16W
R485	1-218-985-11	RES-CHIP	470K	5%	1/16W
R486	1-218-990-11	SHORT CHIP	0		
R489	1-218-941-11	RES-CHIP	100	5%	1/16W
R490	1-218-941-11	RES-CHIP	100	5%	1/16W
R491	1-218-941-11	RES-CHIP	100	5%	1/16W
R501	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R502	1-218-953-11	RES-CHIP	1K	5%	1/16W
R503	1-218-977-11	RES-CHIP	100K	5%	1/16W
R504	1-218-977-11	RES-CHIP	100K	5%	1/16W
R505	1-208-635-11	METAL CHIP	10	0.5%	1/16W
R507	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R508	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R509	1-218-990-11	SHORT CHIP	0		
R511	1-218-990-11	SHORT CHIP	0		
R512	1-218-990-11	SHORT CHIP	0		
R513	1-218-965-11	RES-CHIP	10K	5%	1/16W
R514	1-218-973-11	RES-CHIP	47K	5%	1/16W
R515	1-218-965-11	RES-CHIP	10K	5%	1/16W
R516	1-218-973-11	RES-CHIP	47K	5%	1/16W
R517	1-218-965-11	RES-CHIP	10K	5%	1/16W
R518	1-218-973-11	RES-CHIP	47K	5%	1/16W
R519	1-218-953-11	RES-CHIP	1K	5%	1/16W
R520	1-218-949-11	RES-CHIP	470	5%	1/16W
R521	1-218-990-11	SHORT CHIP	0		
R522	1-218-990-11	SHORT CHIP	0		
R524	1-218-945-11	RES-CHIP	220	5%	1/16W
R525	1-216-864-11	SHORT CHIP	0		
R526	1-216-864-11	SHORT CHIP	0		
R561	1-218-981-11	RES-CHIP	220K	5%	1/16W
R601	1-218-981-11	RES-CHIP	220K	5%	1/16W
R605	1-218-953-11	RES-CHIP	1K	5%	1/16W
R608	1-218-446-11	METAL CHIP	1	5%	1/10W
R609	1-218-977-11	RES-CHIP	100K	5%	1/16W
R612	1-220-804-11	RES-CHIP	2.2M	5%	1/16W
R616	1-218-953-11	RES-CHIP	1K	5%	1/16W
R617	1-218-953-11	RES-CHIP	1K	5%	1/16W
R618	1-218-977-11	RES-CHIP	100K	5%	1/16W
R619	1-218-977-11	RES-CHIP	100K	5%	1/16W
R620	1-218-990-11	SHORT CHIP	0		
R621	1-218-990-11	SHORT CHIP	0		
R622	1-218-990-11	SHORT CHIP	0		
R623	1-218-990-11	SHORT CHIP	0		
R624	1-218-985-11	RES-CHIP	470K	5%	1/16W
R625	1-218-985-11	RES-CHIP	470K	5%	1/16W
R628	1-218-933-11	RES-CHIP	22	5%	1/16W
R629	1-220-804-11	RES-CHIP	2.2M	5%	1/16W
R635	1-216-864-11	SHORT CHIP	0		
R636	1-218-985-11	RES-CHIP	470K	5%	1/16W
R638	1-218-981-11	RES-CHIP	220K	5%	1/16W
R639	1-218-989-11	RES-CHIP	1M	5%	1/16W
R640	1-218-981-11	RES-CHIP	220K	5%	1/16W
R641	1-218-989-11	RES-CHIP	1M	5%	1/16W
R642	1-218-977-11	RES-CHIP	100K	5%	1/16W
R643	1-218-990-11	SHORT CHIP	0		
R645	1-218-985-11	RES-CHIP	470K	5%	1/16W
R646	1-218-973-11	RES-CHIP	47K	5%	1/16W
R647	1-218-989-11	RES-CHIP	1M	5%	1/16W
R648	1-245-456-21	METAL CHIP	1	1%	1/5W
R649	1-245-456-21	METAL CHIP	1	1%	1/5W
R650	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R652	1-218-990-11	SHORT CHIP	0		
R653	1-218-969-11	RES-CHIP	22K	5%	1/16W
R654	1-218-989-11	RES-CHIP	1M	5%	1/16W
R657	1-218-990-11	SHORT CHIP	0		
R659	1-218-977-11	RES-CHIP	100K	5%	1/16W
R660	1-218-985-11	RES-CHIP	470K	5%	1/16W
R661	1-218-985-11	RES-CHIP	470K	5%	1/16W
R662	1-218-985-11	RES-CHIP	470K	5%	1/16W
R663	1-218-981-11	RES-CHIP	220K	5%	1/16W
R664	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R665	1-218-990-11	SHORT CHIP	0		
R668	1-216-864-11	SHORT CHIP	0		

MAIN

Ref. No.	Part No.	Description				Remark
R670	1-218-990-11	SHORT CHIP	0			
R671	1-218-990-11	SHORT CHIP	0			
R673	1-218-990-11	SHORT CHIP	0			
R675	1-220-804-11	RES-CHIP	2.2M	5%	1/16W	
R677	1-216-864-11	SHORT CHIP	0			
R678	1-218-990-11	SHORT CHIP	0			
R679	1-218-945-11	RES-CHIP	220	5%	1/16W	
R680	1-216-864-11	SHORT CHIP	0			
R681	1-218-989-11	RES-CHIP	1M	5%	1/16W	
R682	1-218-989-11	RES-CHIP	1M	5%	1/16W	
R683	1-218-989-11	RES-CHIP	1M	5%	1/16W	
R684	1-218-965-11	RES-CHIP	10K	5%	1/16W	
R685	1-218-965-11	RES-CHIP	10K	5%	1/16W	
R706	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	
R707	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	
R708	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	
R709	1-218-965-11	RES-CHIP	10K	5%	1/16W	
R710	1-218-965-11	RES-CHIP	10K	5%	1/16W	
R711	1-218-965-11	RES-CHIP	10K	5%	1/16W	
R712	1-218-990-11	SHORT CHIP	0			
R713	1-218-953-11	RES-CHIP	1K	5%	1/16W	
R801	1-218-961-11	RES-CHIP	4.7K	5%	1/16W	
R802	1-218-990-11	SHORT CHIP	0			
R804	1-218-933-11	RES-CHIP	22	5%	1/16W	
R805	1-218-933-11	RES-CHIP	22	5%	1/16W	
R806	1-218-961-11	RES-CHIP	4.7K	5%	1/16W	
R807	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	
R808	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	
R809	1-218-990-11	SHORT CHIP	0			
R810	1-218-990-11	SHORT CHIP	0			
R811	1-218-965-11	RES-CHIP	10K	5%	1/16W	
R812	1-218-977-11	RES-CHIP	100K	5%	1/16W	
R813	1-218-945-11	RES-CHIP	220	5%	1/16W	
R815	1-218-981-11	RES-CHIP	220K	5%	1/16W	
R817	1-218-953-11	RES-CHIP	1K	5%	1/16W	
R818	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	
R819	1-218-953-11	RES-CHIP	1K	5%	1/16W	
R820	1-218-945-11	RES-CHIP	220	5%	1/16W	
R821	1-220-804-11	RES-CHIP	2.2M	5%	1/16W	
R822	1-218-989-11	RES-CHIP	1M	5%	1/16W	
R823	1-218-965-11	RES-CHIP	10K	5%	1/16W	
R824	1-218-990-11	SHORT CHIP	0			
R825	1-218-990-11	SHORT CHIP	0			
R826	1-218-990-11	SHORT CHIP	0			
R827	1-218-941-11	RES-CHIP	100	5%	1/16W	
R833	1-218-990-11	SHORT CHIP	0			
R834	1-218-985-11	RES-CHIP	470K	5%	1/16W	
R835	1-208-943-11	METAL CHIP	220K	0.5%	1/16W	
R836	1-208-927-11	METAL CHIP	47K	0.5%	1/16W	
R837	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	
R839	1-218-990-11	SHORT CHIP	0			
R840	1-218-990-11	SHORT CHIP	0			
R841	1-208-635-11	METAL CHIP	10	0.5%	1/16W	
R842	1-218-973-11	RES-CHIP	47K	5%	1/16W	
R843	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	
R845	1-216-864-11	SHORT CHIP	0			
R854	1-208-927-11	METAL CHIP	47K	0.5%	1/16W	
R855	1-218-990-11	SHORT CHIP	0			

Ref. No.	Part No.	Description				Remark
R856	1-218-990-11	SHORT CHIP	0			
R857	1-218-985-11	RES-CHIP	470K	5%	1/16W	
R858	1-218-990-11	SHORT CHIP	0			
R859	1-218-990-11	SHORT CHIP	0			
R860	1-218-965-11	RES-CHIP	10K	5%	1/16W	
R861	1-208-635-11	METAL CHIP	10	0.5%	1/16W	
R863	1-218-990-11	SHORT CHIP	0			
R864	1-218-945-11	RES-CHIP	220	5%	1/16W	
R865	1-218-989-11	RES-CHIP	1M	5%	1/16W	
R866	1-218-989-11	RES-CHIP	1M	5%	1/16W	
R868	1-218-990-11	SHORT CHIP	0			
R869	1-218-990-11	SHORT CHIP	0			
R872	1-218-965-11	RES-CHIP	10K	5%	1/16W	
R873	1-218-965-11	RES-CHIP	10K	5%	1/16W	
R876	1-218-990-11	SHORT CHIP	0			
R878	1-218-937-11	RES-CHIP	47	5%	1/16W	
R879	1-218-937-11	RES-CHIP	47	5%	1/16W	
R880	1-218-937-11	RES-CHIP	47	5%	1/16W	
R881	1-218-981-11	RES-CHIP	220K	5%	1/16W	
R882	1-218-985-11	RES-CHIP	470K	5%	1/16W	
R883	1-218-989-11	RES-CHIP	1M	5%	1/16W	
R884	1-218-985-11	RES-CHIP	470K	5%	1/16W	
R885	1-218-989-11	RES-CHIP	1M	5%	1/16W	
R886	1-218-977-11	RES-CHIP	100K	5%	1/16W	
R887	1-218-977-11	RES-CHIP	100K	5%	1/16W	
R888	1-218-981-11	RES-CHIP	220K	5%	1/16W	
R889	1-218-973-11	RES-CHIP	47K	5%	1/16W	
R890	1-218-981-11	RES-CHIP	220K	5%	1/16W	
R891	1-218-990-11	SHORT CHIP	0			
R892	1-218-981-11	RES-CHIP	220K	5%	1/16W	
R893	1-220-804-11	RES-CHIP	2.2M	5%	1/16W	
R894	1-218-977-11	RES-CHIP	100K	5%	1/16W	
R895	1-218-977-11	RES-CHIP	100K	5%	1/16W	
R897	1-218-990-11	SHORT CHIP	0			
R903	1-218-989-11	RES-CHIP	1M	5%	1/16W	
R904	1-218-989-11	RES-CHIP	1M	5%	1/16W	
R906	1-218-973-11	RES-CHIP	47K	5%	1/16W	
R907	1-218-965-11	RES-CHIP	10K	5%	1/16W	
R908	1-218-969-11	RES-CHIP	22K	5%	1/16W	
R910	1-218-969-11	RES-CHIP	22K	5%	1/16W	
R912	1-218-981-11	RES-CHIP	220K	5%	1/16W	
R913	1-218-990-11	SHORT CHIP	0			
R914	1-208-707-11	METAL CHIP	10K	0.5%	1/16W	
R917	1-218-981-11	RES-CHIP	220K	5%	1/16W	
R918	1-218-985-11	RES-CHIP	470K	5%	1/16W	
R920	1-218-985-11	RES-CHIP	470K	5%	1/16W	
R922	1-218-977-11	RES-CHIP	100K	5%	1/16W	
R923	1-220-804-11	RES-CHIP	2.2M	5%	1/16W	
R924	1-218-985-11	RES-CHIP	470K	5%	1/16W	
R925	1-208-927-11	METAL CHIP	47K	0.5%	1/16W	
R926	1-208-935-11	METAL CHIP	100K	0.5%	1/16W	
R927	1-208-683-11	METAL CHIP	1K	0.5%	1/16W	
R929	1-208-935-11	METAL CHIP	100K	0.5%	1/16W	
R930	1-208-927-11	METAL CHIP	47K	0.5%	1/16W	
R931	1-218-990-11	SHORT CHIP	0			
R933	1-208-943-11	METAL CHIP	220K	0.5%	1/16W	
R934	1-208-715-11	METAL CHIP	22K	0.5%	1/16W	

MAIN

Ref. No.	Part No.	Description			Remark
R935	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R936	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R937	1-208-715-11	METAL CHIP	22K	0.5%	1/16W
R938	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R939	1-218-977-11	RES-CHIP	100K	5%	1/16W
R940	1-218-981-11	RES-CHIP	220K	5%	1/16W
R950	1-218-941-11	RES-CHIP	100	5%	1/16W
R957	1-208-943-11	METAL CHIP	220K	0.5%	1/16W
R960	1-218-990-11	SHORT CHIP	0		
R961	1-220-803-81	RES-CHIP	4.7	5%	1/16W
R962	1-218-990-11	SHORT CHIP	0		
R963	1-218-990-11	SHORT CHIP	0		
R965	1-218-990-11	SHORT CHIP	0		
R966	1-218-973-11	RES-CHIP	47K	5%	1/16W
R967	1-218-985-11	RES-CHIP	470K	5%	1/16W
R968	1-218-985-11	RES-CHIP	470K	5%	1/16W
R969	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R974	1-218-977-11	RES-CHIP	100K	5%	1/16W
		< SWITCH >			
S890	1-786-691-21	SWITCH, PUSH (1 KEY)(PROTECT DETECT)			
S891	1-786-692-21	SWITCH, PUSH (1 KEY) (Hi-MD PROTECT DETECT)			
S892	1-762-946-12	SWITCH, PUSH (1 KEY) (HALF LOCK)			
S893	1-762-805-21	SWITCH, PUSH (1 KEY) (OPEN/COLSE DETECT)			
* S894	1-786-079-21	SWITCH, PUSH (1 KEY) (BATTERY INSERT DETECT)			
		< THERMISTOR (POSITIVE) >			
THP401	1-805-580-11	THERMISTOR, POSITIVE			
		< VARISTOR >			
VDR801	1-805-697-21	VARISTOR (SMD)			
		< VIBRATOR >			
X801	1-813-353-21	VIBRATOR, CERAMIC (48MHz)			
X802	1-813-314-11	VIBRATOR, CRYSTAL (22.5792MHz)			

****

MISCELLANEOUS
****

Ref. No.	Part No.	Description	Remark
59	1-805-513-11	LCD MODULE	
⚠163	X-2021-785-1	OP SERVICE ASSY (ABX-U) (including HR601(OVER WRITE HEAD))	
M701	8-835-782-12	MOTOR, DC SSM18D/C-NP (SPINDLE)	
M702	1-787-143-11	MOTOR, DC (SLED)	
M703	1-477-519-21	MOTOR UNIT, DC (OVER WRITE HEAD UP/DOWN)	

****

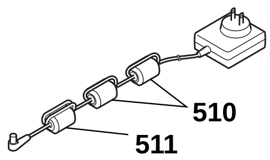
ACCESSORIES
****

Ref. No.	Part No.	Description	Remark
	1-543-793-41	FILTER, CLAMP (FERRITE CORE) (for Optional Stereo Microphone)	
	1-543-798-31	FILTER, CLAMP (FERRITE CORE) (for Optional Line Cable)	
⚠	1-569-007-12	ADAPTOR, CONVERSION 2P (JE)	
	1-816-206-11	CONNECTOR, LIGHT (US, CND, AEP, UK, EE, TW, AUS)	
	1-816-206-21	CONNECTOR, LIGHT (E18, HK, KR, CH, JE)	
	3-220-749-01	CASE, CARRYING (EXCEPT US)	
	3-266-536-11	MANUAL, INSTRUCTION (ENGLISH) (EXCEPT KR, CH, JE)	
	3-266-536-21	MANUAL, INSTRUCTION (FRENCH) (CND, AEP)	
	3-266-536-31	MANUAL, INSTRUCTION (GERMAN) (AEP)	
	3-266-536-41	MANUAL, INSTRUCTION (SPANISH) (AEP)	
	3-266-536-51	MANUAL, INSTRUCTION (DUTCH) (AEP)	
	3-266-536-61	MANUAL, INSTRUCTION (SWEDISH) (AEP)	
	3-266-536-71	MANUAL, INSTRUCTION (ITALIAN) (AEP)	
	3-266-536-81	MANUAL, INSTRUCTION (PORTUGUESE) (AEP)	
	3-266-536-91	MANUAL, INSTRUCTION (FINNISH) (AEP)	
	3-266-537-11	MANUAL, INSTRUCTION (CZECH) (EE)	
	3-266-537-21	MANUAL, INSTRUCTION (HUNGARIAN) (EE)	
	3-266-537-31	MANUAL, INSTRUCTION (POLISH) (EE)	
	3-266-537-41	MANUAL, INSTRUCTION (SLOVAKIAN) (EE)	
	3-266-537-51	MANUAL, INSTRUCTION (RUSSIAN) (EE)	
	3-266-537-61	MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (E18, HK, TW)	
	3-266-537-71	MANUAL, INSTRUCTION (KOREAN) (KR)	
	3-266-537-81	MANUAL, INSTRUCTION (ENGLISH) (CH, JE)	
	3-266-537-91	MANUAL, INSTRUCTION (SIMPLIFIED CHINESE) (CH, JE)	
	X-2022-247-4	CD-ROM (APPLICATION) ASSY (SonicStage/MD Simple Burner) (US, CND)	
	X-2022-248-3	CD-ROM (APPLICATION) ASSY (SonicStage/MD Simple Burner) (AEP, UK, EE)	
	X-2023-448-1	CD-ROM (APPLICATION) ASSY (SonicStage/MD Simple Burner) (E18, HK, TW, KR, AUS, CH)	
	X-2023-450-1	CD-ROM (APPLICATION) ASSY (SonicStage/MD Simple Burner) (JE)	

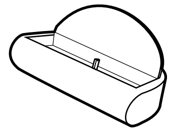
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
⚠501	1-477-965-21	ADAPTOR, AC (AC-ES3010K) (JE)	
⚠501	1-478-423-31	ADAPTOR, AC (AC-ES3010K) (KR)	
⚠501	1-478-424-31	ADAPTOR, AC (AC-ES3010K) (CH)	
⚠501	1-478-425-51	ADAPTOR, AC (AC-ES3010K) (AEP, EE, E18)	
⚠501	1-478-426-51	ADAPTOR, AC (AC-ES3010K) (UK, HK)	
⚠501	1-478-427-31	ADAPTOR, AC (AC-ES3010K) (US, CND, TW)	
⚠501	1-478-428-31	ADAPTOR, AC (AC-ES3010K) (AUS)	
502	1-756-439-11	STAND, CHARG (BCA-MZNH900)	
503	1-478-468-21	REMOTE COMMANDER (RM-MC40ELK)	(CH, JE)
503	1-478-512-11	REMOTE COMMANDER (RM-MC38EL)	(EXCEPT CH, JE)
504	8-954-007-94	HEADPHONE MDR-027SP/S SET (US)	
505	8-954-008-90	RECEIVER, EAR MDR-E808SP/C SET	(EXCEPT US)
506	1-823-519-61	CORD, CONNECTION (DEDICATED USB CABLE)	
507	1-756-306-22	BATTERY, NICKEL HYDROGEN (NH-10WM)	(EXCEPT US, CND)
507	1-756-306-32	BATTERY, NICKEL HYDRIGEN (NH-10WM)	(US, CND)
508	1-251-895-11	BATTERY CASE	
509	3-008-521-01	CASE, CHARGER	
510	1-543-793-41	FILTER, CLAMP (FERRITE CORE)	
511	1-543-798-31	FILTER, CLAMP (FERRITE CORE)	

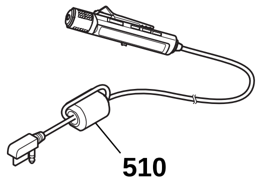
501
AC power adaptor (1)



502
Battery charging stand (1)



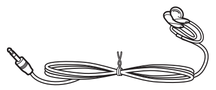
503
Remote control (1)



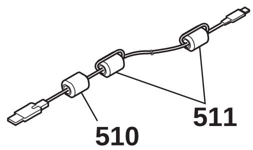
504
Headphones (USA model only) (1)



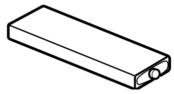
505
Earphones (except USA model) (1)



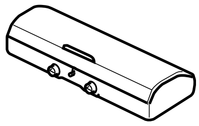
506
Dedicated USB cable (1)



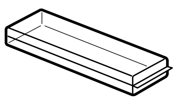
507
NH-10WM Nickel metal hydride rechargeable battery (1)



508
Dry battery case (1)



509
Battery carrying case (1)



Note: Please refer to “DISASSEMBLY (3-11. POSITION OF FERRITE CORE) (Page 12)” about the attachment position of the ferrite core of No. 501, 503, 506.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2004.08	New
1.1	2004.09	Change of Part No. for Hi-MD3 adjustment disc HMD1GSDJ (SPM-04101)